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ABSTRACT

The Association of Research Libraries' Office of Management Services (OMS), working with the Research Libraries Group, Inc. (RLG), began the North American Collections Inventory Project (NCIP) in July 1983 as a cooperative effort intended eventually to involve research libraries throughout the United States and Canada. The project's long-term goal is to develop an online North American inventory of research collections that can assist scholars in locating materials needed to support their research. Designed as a guide for libraries undertaking an interlibrary inventory or Conspectus-based collection assessment, this manual is divided into three parts. The first section provides an overview and serves as an orientation aid and ready reference tool for bibliographers and other collection development librarians. The second part covers the Conspectus methodology and procedures in detail and is intended to provide a handbook for planning, organizing, and carrying out the library's collection assessment within the framework of NCIP. This part also presents a brief history of NCIP and deals with issues and questions relating to the Conspectus methodology. The third part discusses four approaches to collection assessment: qualitative methods; quantitative methods; sampling methods; and list-checking methods. A variety of reference documents, examples, and statistical aids are appended. (MAB)

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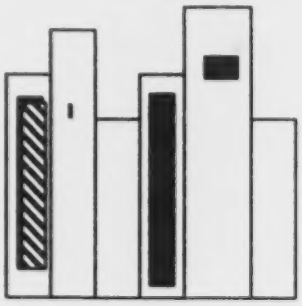

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MANUAL FOR THE NORTH AMERICAN INVENTORY OF RESEARCH LIBRARY COLLECTIONS

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Revised Edition
September 1988

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MANUAL FOR THE NORTH AMERICAN INVENTORY OF RESEARCH LIBRARY COLLECTIONS

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PREFACE

The Association of Research Libraries' Office of Management Services (OMS), working with the Research Libraries Group, Inc. (RLG), began the North American Collections Inventory Project (NCIP) in July 1983 as a cooperative effort intended eventually to involve research libraries throughout the United States and Canada. The project's long-term goal is to develop an online North American inventory of research collections which can assist scholars in locating materials needed to support their research. It is also expected that the inventory will strengthen coordinated management of North American research collections and help to determine shared responsibilities for maintaining these vital resources.

The Manual is designed as a guide for libraries undertaking Conspectus-based collection assessments. The manual is divided into three parts. The first section provides an overview and serves as an orientation aid and ready reference tool for bibliographers and other collection development librarians. The second part covers the Conspectus methodology and procedures in detail and is intended to provide a handbook for planning, organizing and carrying out the library's collection assessment within the framework of the North American Collections Inventory Project. This part also gives the background and brief history of NCIP and deals with issues and questions relating to the Conspectus methodology. The third part discusses several approaches to collection assessment. Additionally, the manual brings together a variety of reference documents, examples and statistical aids, as appendixes.

The manual draws heavily upon documentation prepared by the Research Libraries Group, Inc. staff and on materials developed by the Canadian Conspectus Project; it also includes materials developed by the Alaska Statewide Collection Development Steering Committee, the Indiana University Libraries Collection Development Policy Task Force, and Blaine H. Hall at Harold B. Lee Library at Brigham Young University. Permission to use these materials is greatly appreciated.

The writing of this manual was accomplished as a team effort of the Office of Management Services, with Jeffrey Gardner assigned as Project Director and Jutta Reed-Scott as Collection Development Specialist. Project staff received counsel, support, and thoughtful suggestions from the Advisory Committee to the North American Collections Inventory Project as well as from the Association of Research Libraries' Committee on Collection Development. We would like to extend special thanks to David Farrell, Associate Dean for Collection Management, Indiana University, Mary Jane Starr, then CARL Conspectus Coordinator, National Library of Canada, James Coleman, Program Associate, and Annette Melville, Senior Program Officer, The Research Libraries Group, and Anthony Ferguson, Director, Library Resource Group, Columbia University Libraries.

An initial draft of this manual was developed with the support of the Council on Library Resources, Inc. During 1984 three ARL libraries—Indiana University, the University of Notre Dame, and Purdue University—worked with the OMS to test the manual. This test, and the editing and preparation of the 1985 edition of the manual were supported by a grant from the Lilly Endowment. The Andrew W. Mellon Foundation provided support for the implementation of NCIP and for the revision of the manual.

The revised edition of the manual reflects the changes and experiences in implementing NCIP over the past three years, as well as new developments that have been initiated by participants and OMS. The OMS staff is indebted to the many bibliographers who used the manual and suggested improvements. The revised edition owes much to their careful review and perceptive comments.

Several content and organizational changes were made with this new edition. One change is the addition of an overview section that brings together the essential explanations and provides an introduction to Conspectus-based collection assessments. As a result of suggestions from bibliographers the procedural information has been greatly expanded. Still other changes have been made in the formatting, in the examples, and in the appendixes. It is our hope that, taken together, these changes and numerous minor revisions in the text will make the manual easier to use.

I. OVERVIEW

1. NCIP and the Conspectus: Status and Plans

In June 1988, Association of Research Libraries, working with the Research Libraries Group, Inc., completed the three phases of the project that focused on implementing the North American Collections Inventory as a cooperative effort to develop an online inventory of research library collections. The inventory is intended to include data describing collections from throughout the United States and Canada. This effort builds upon a project conceived by RLG libraries in the late 1970s to distribute collections responsibilities through an interlibrary inventory or Conspectus. The inventory will strengthen coordinated management of national research collections and help to determine shared responsibilities for these vital resources.

During the intervening years NCIP has moved from a pilot project to a national and even international effort. Important milestones include:

- Approximately 80 percent of the ARL membership is participating in NCIP or plans to begin participation in the near future. In some instances participation has been organized on a regional basis;

- NCIP is an operational program within OMS;

- OMS staff have trained 18 collection development staff from member libraries to provide assistance to participating libraries. Available assistance includes both project planning and staff training, and is available from these trained specialists as well as from OMS staff;

- Training has been provided to staffs of 40 non-RLG members of ARL and those libraries have begun to complete divisions of the Conspectus;

- OMS worked with the National Library of Canada in adapting Conspectus materials for Canadian applications;

- Training has been provided for staffs of eleven research libraries in Scotland;

- OMS worked with senior staff of the Ministere de l'Education Nationale in France to provide training for two groups of French librarians;

- *NCIP News,* a project newsletter, began publication in January 1986;

- NCIP Users' Group began meeting at ALA in 1987, and these informal meetings have served as useful forums of discussion of Conspectus-related issues;

- Revisions of worksheets and development of Supplemental Guidelines for all subject divisions of the Conspectus have been scheduled for completion;

- OMS is serving as distributor for Conspectus materials for non-RLG libraries and is coordinating these libraries' data entry into the Conspectus On-line;

- Preparation of a SPEC kit on the Conspectus;

- OMS is making available a microcomputer-based Conspectus system that was developed at the University of North Carolina.

Today the Conspectus effort has expanded beyond the RLG membership and grown into what is known as the North American Collections Inventory Project and is being adapted for European projects. As participation broadened, the terminology and methodology were adapted. The Conspectus project of the Canadian Association of Research Libraries resulted in the "Canadianization" of the Conspectus which has included several special expansions: new language codes to describe the bilingual factor; breakdowns of the Conspectus for Canadian history, literature, and law; and translation of Conspectus materials into French. The Conspectus in Scotland also adjusted the worksheets to ensure that the "Scottish" content of the collections is highlighted. It is evident that additional amplifications will be needed. While these enhancements will contribute to the vitality of the Conspectus, the process of building the tool is essentially finished.

2. Benefits and Uses

The long-term vision behind NCIP focuses on the potential that a collections inventory will provide the information needed to make collective decisions in the areas of collection development, preservation, and cataloging. On the regional, national and now international level, the Conspectus provides a map for describing research collections in the aggregate and an opportunity for developing cooperative programs in collection management, cataloging, and preservation.

a. Coordinated Collection Development

One central goal of NCIP is to build the framework to aid cooperative collection development. During the past three years several approaches have been pursued to use Conspectus data for advancing cooperative collection development on the national, regional, and statewide level. Several projects provide models. These include:

- Canadian Association of Research Libraries Conspectus Project

- University of California Libraries Project

- Indiana Project involving Indiana University, Purdue University, and University of Notre Dame Libraries;

- Committee on Institutional Cooperation (CIC: Big Ten and University of Chicago) Conspectus Project.

On the national level, members of the Research Libraries Group have developed several strategies to facilitate distributed collecting responsibilities. One initial strategy centers on pinpointing subject fields where RLG's aggregate collections are weak. A Primary Collection Responsibility (PCR) is

assigned to a participant library when it is determined, through the Conspectus building process, that for a particular subject, geographic area, or form of material there are no libraries collecting above a level 3. In addition, subject-focused cooperative collection development efforts are underway in music to share collecting responsibility for twentieth-century composers; in art to share responsibility for acquiring and cataloging of art exhibition catalogs; and several other subject bibliographer teams are exploring cooperative approaches to serials collections.

It is important to recognize that the Conspectus provides only the *tool* for decision-making. It cannot resolve the complex and difficult political, administrative and economic issues of coordinating collection development. It is also clear that cooperative collection development programs are in the early stages of an evolutionary process that will stretch over many years.

b. Cooperative Preservation

The Conspectus data provides a fertile opportunity for establishing cooperative preservation activities. One approach centers on the premise of basing cooperative preservation selection on strong subject collections (usually at the 4 - level, when such collections exist). Given the enormous need, the division of preservation responsibility can be determined through Conspectus data. The importance of Conspectus values in planning preservation projects is evidenced by the requirement to reference Conspectus values in preservation grant proposals to the National Endowment for the Humanities. As the national preservation program continues to evolve, the Conspectus can provide the means by which priorities for preservation projects will be set and recorded.

c. Local Benefits

On the local level, the Conspectus provides a methodology and framework that can be used by participating libraries to:

- develop a collection management tool to respond to changes in programs, user needs, and resource availability;
- describe strengths and weaknesses of existing collections and current collecting programs;
- identify key areas; i.e. problems or opportunities that require action;
- serve as the basis for collection development policies;
- support budget requests and budget allocation decisions;
- inform faculty and library users of collecting policies;
- train collection development staff and strengthen communication among colleagues;
- secure discussion and agreement among collection development staff regarding collecting responsibilities;
- identify potential preservation priorities;

- provide information about preservation projects;
- serve as the basis for weeding and storage decisions;
- focus university attention on the needs of the library;
- provide data for accreditation; grant proposals, etc.

To date, experience shows that many libraries find the Conspectus process and the data most helpful for these local applications. As Conspectus work continues it is expected that the more immediate advantages for the individual library will encompass the longer-range benefits of inter-institutional resource sharing.

3. Summary Description of the Conspectus Methodology

The Conspectus system is a method of surveying collections using a descriptive instrument—the Conspectus worksheets—and standardized methodologies for evaluating collections. As of August 1988, the Conspectus worksheets encompass 24 divisions covering close to 7,000 subject descriptors. The subject divisions correspond to major disciplines and include:

Agriculture

Anthropology

Art and Architecture

Auxiliary Sciences of History

Cartographic Materials

East Asia

Economics and Sociology

Education

Government Documents

History

Latin American Studies

Law

Library and Information Sciences

Linguistics, Languages and Literatures

Medical and Health Sciences

Music

Natural History and Biology

Philosophy and Religion

Physical Geography

Physical Sciences

Political Science

Psychology

South Asia

Technology

Values Reported by Bibliographers

Subject Division

RLG CONSPECTUS WORKSHEET

INSTITUTION:

PHYSICAL GEOGRAPHY AND EARTH SCIENCES

LC CLASS	SUBJECT GROUP		COLLECTION LEVELS AND LANGUAGE COVERAGE		COMMENTS
			ECS	CCI	
Subject Category	GEOMORPHOLOGY	Subject Descriptor			Comment Note
GB400-406	GE07	General	3E	3E	
	GE08	Periodicals	3E	3E	
	GE09	Methodology	3E	3E	
	GE010	History	2E	2E	Special strength: History of Canadian Geomorphology

The Conspectus is arranged by subject within the framework of the Library of Congress classification. It consists of relatively specific subjects represented by both LC class numbers and subject descriptors drawn from LC and other sources. These subjects are grouped in broad subject categories within the 24 divisions.

Libraries undertaking the assessment of their collections use standard codes to describe the relative strength of their collections for the specific subject breakdowns. Participation in NCIP requires that bibliographers and selectors establish collection levels for both *existing collection strength (ECS) and for current collecting intensity (CCI).* Existing collection strength refers to the strength of the collection already acquired and available; the focus is on retrospective holdings and the breadth and depth of the collection. Current collecting intensity refers to the level of effort (funding, exchange programs, serial subscriptions, etc.) that is presently being expended to build the collection; the focus is on the library's current efforts to develop the collection.

The most important and intellectually demanding task is the assignment of the levels of collecting intensity. The North American Inventory uses a set of six codes. These have the underlying purposes of providing a common understanding and interpretation among participating libraries; and establishing a standard language to express qualitative judgments regarding the level of collections.

Closely linked to the collecting levels is the language coverage, and the representation of English and foreign language materials is a critical dimension in evaluating and describing collections. Indeed, in many subjects language coverage may determine the appropriate collection level. Four language codes are used to indicate the language priorities and limitations that govern the library's collecting policies.

Finally, notes may be used to highlight special strengths or policies. There are three types of notes in the Conspectus: scope notes, comment notes, and preservation scope notes.

4. Available Resources

Much work has been devoted to preparing tools and resources to assist libraries in carrying out the Conspectus-based assessments. Resources available from OMS (see NCIP Order Form, p. 67 for details) are:

a. NCIP Manual

This manual serves as the reference handbook. It provides detailed procedural and technical information; it contains answers to a number of commonly asked questions; and discusses the several approaches to collection assessment.

b. Conspectus Materials

Conspectus materials fall into three categories:

i. Worksheets.

The Conspectus worksheets are the primary instrument for reporting the results of libraries' assessments of their collections. With minor exceptions, worksheets are available for all fields of knowledge and currently cover 24 divisions covering close to 7,000 subject descriptors.

ii. Supplemental guidelines.

Their purpose is to outline a general approach to a subject division. Subject specific guidelines have been developed to respond to the need for standardized approaches and tools for assessment. They provide an overview of the nature of the subject and its literature and suggest appropriate standard guides, bibliographies, and periodical indexes for approaching the collection assessment. The standard collecting level definitions are expanded to indicate benchmarks or percentages of holdings from the suggested tools.

iii. Verification studies.

Their purpose is to provide in-depth analyses of narrow portions of Conspectus divisions. Verification studies are comparative collection evaluation studies that allow participating libraries to test the accuracy of their collection assessments. They focus on testing a specific segment of the Conspectus and use specially designed, statistically valid lists derived from the "universe" of research literature. Verification studies have two advantages: they provide a standard approach to assessing particular segments of the Conspectus; and they offer comparative data from participating libraries.

c. NCIP NEWS

This newsletter is issued several times a year and reports activities and developments within NCIP. It reports changes in and additions to Conspectus materials, highlights progress and efforts in completing the Conspectus in ARL libraries, and describes special Conspectus projects.

5. Implementing NCIP

The implementation of NCIP is divided into three major phases:

- Exploratory Investigation
- Planning
- Training and Orientation

a. Exploratory Investigation

During the first or exploratory phase, the library director, in consultation with collection development staff, considers the library rationale for undertaking the project, potential staffing requirements and costs, and evaluates training needs.

b. Planning

After the library director has made the decision to participate, the second or planning phase begins. Planning for implementing Conspectus-based collection assessment projects is a critical requirement.

The checklist below highlights the decisions that need to be made. These steps are discussed in detail in Section VI of the manual.

i. Establishment of Local Goals

The key questions are what are the needs of the library's collection management program and how will the collection assessment data contribute to shaping the program in the future? Goals may include staff development and training, formulation of collection development policies, participation in cooperative programs, identification of preservation priorities and/or increased budgetary support. The library's specific goals can have a major impact on planning and organizing the Conspectus assessments. For example, if one goal is to develop broad staff understanding of collection strengths and weaknesses, this will impact on the number and kind of staff involved.

ii. Establishment of Organizational and Staffing Requirements

How a library organizes to implement the Conspectus flows from the goals coupled with the organizational structure of the library. Experience has shown that local factors determine the optimal organizational structure.

An initial issue is who will be involved in the Conspectus project. For most libraries, the work will require a staff member to coordinate the project. In some libraries a project team is appointed, which is chaired by the coordinator. In other libraries the coordinator works directly with individual bibliographers. In all libraries it is necessary to identify the primary and—in some cases the secondary or even tertiary (e.g. Special Collections librarians) selectors—who will be involved in completing Conspectus divisions. But staffing requirements will differ from library to library and major variables include:

- the experience, knowledge, and background of the individual bibliographers or selectors completing the worksheets—that is, their knowledge of their collections and their knowledge of the literature. The more experienced staff members with a greater knowledge of the collection may be able to more quickly reach a valid and defensible assessment;

- the size of the Conspectus division;

- the size and complexity of the collection development organization. Those libraries in which several staff are developing a specific subject collection report that they have had to spend time coordinating efforts, sharing results, and collaborating on the assigning of collection level codes;

- the size and quality of the collection will have impact on the time required to assess it. Participants report that, in general, stronger collections require more time to assess;

- the assessment approaches chosen by the selector/bibliographer to assist him or her in assigning collection level codes can greatly influence costs.

A corollary to the number of staff involved in the project is the kind of staff who participate. A

number of libraries have reported that the availability of support staff to carry out list checking and other data gathering assignments has been important to effective time management.

iii. Determination of Costs

There are two general categories of costs; cost of materials and support services from ARL and RLG; and, the staff costs related to completing the worksheets. The first category can include: NCIP Manuals (at $30); worksheets ($80); optional onsite training (approx. $600, plus travel expenses); costs of entering data into the Conspectus On-line (depends on how many sections are done, but would be approximately $2000 for the entire Conspectus, usually spread over two to three years); the cost of printouts of the Conspectus; and the costs associated with use of the Conspectus On-line (approximately $200 startup fee, plus use charges).

The second category, staff costs, is more difficult to estimate since it depends on several variables, and on some choices that libraries and individual collection development staff have to make. Experiences at participating libraries have varied widely, but a reasonable estimate has been that an average of approximately 25 hours of staff time per Conspectus division are required to complete the worksheets.

iv. Ordering NCIP Materials

All worksheets, supplemental guidelines, and verification studies are available from the Office of Management Services. The Office also provides a standing order service for NCIP materials. Subscribers receive revised worksheets, new supplemental guidelines and verification studies as they are published, sample reports of libraries' approaches to completing sections of the Conspectus, and a subscription to NCIP News. The cost is $75 per year and orders may be placed by contacting OMS, (202)232-8656.

v. Establishment of Priorities for Completing Conspectus Divisions

Typically, libraries have identified two or three divisions, which will be completed first. This allows the library to gain experience in the Conspectus process, and recognizes staffing constraints.

vi. Determination of Project Timetable

There are striking differences in the amount of time taken to complete the project. Options include a fast-track approach that aims to complete the project within one year or a staged implementation over two to three years. The critical steps are to establish a realistic timetable and to assign specific Conspectus worksheets to bibliographers and to set the schedule for completing the assigned divisions.

c. Training and Orientation

Staff training and orientation are the focus of the third phase. The work of training staff and building a common understanding is made much easier for individual libraries through OMS's NCIP training program. OMS staff and a group of OMS-trained NCIP trainers are available to provide training and/or orientation sessions to individual library staffs, or to regional groups. The availability of the geographically dispersed NCIP trainers can reduce the travel costs associated with

training and provide an opportunity for library staff to work with librarians who have actual experience with the Conspectus. Training sessions typically include practical experience with collection assessments and the Conspectus worksheets and last from one to three days, depending on the size of the group and the goals of the workshop.

Taken together these steps set the stage for the fourth phase: implementation.

6. Collection Assessment Strategies

Evaluating research collections is ultimately a process of judgment based on knowledge, experience, and data. There is no set of standards, nor is there any single correct model that can dictate how a librarian should approach Conspectus-based evaluations. Considerable variation is evident in the chosen approach. Indeed one of the lessons learnt during the implementation phase is that approaches differ from subject to subject and from library to library. While the Manual suggests several techniques from which to choose, the decision is most often influenced by the individual librarian's need for quantitative data to support his or her judgment. Also, when several libraries have worked together on a Conspectus division, there has sometimes been a tendency to over-emphasize quantitative assessments. In the end, the individual librarian has the opportunity to control the time spent and the challenge to carry out the assessments in an efficient, yet accurate manner. For many situations, shelf-scanning is adequate; for others shelf-list measures help; for others checking of standard lists can help; and for others, expert opinion of faculty and other librarians can help. Often, the assessments can be done fairly quickly and impressionistically, with verification efforts focused only on areas where there are serious questions.

Offered below are some general suggestions for effective collection evaluation strategies:

- Select first a Conspectus division that poses the least problems in mastering the Conspectus methodology, e.g. a division in the humanities with available supplemental guidelines.

- Determine subject focus of your library's collection to understand the context of the local collection.

- Identify areas of academic programs in which collection support is strong or limited.

- Determine rough approximation of size of collection; e.g. number of serial subscriptions or shelflist counts. Although there are problems with shelflist data, e.g. it does not capture the quality nor encompass uncataloged materials nor reflect the adequacy of the local collection to meet user needs, the data gives a sense of the size of the collection and points of comparison with the National Shelflist Count.

- Construct a framework for evaluation. Use level 3 -instructional support as the point of reference. The intent is to understand the nature of the subject and the range of materials that constitute different collecting levels and to determine which types of materials in a discrete subject area are associated with which level.

- Get comparative data from similar, or comparable institutions.

- Select collection evaluation method. The primary tool is the *Supplemental Guidelines.* After reviewing the suggested lists, select one or more that will provide the most useful data.

A combination of those activities described above should enable bibliographers to complete the assessments quickly and effectively. Problems may arise, particularly if the assessment involves interdisciplinary subjects. But experience has shown that a predetermined assessment strategy, based on controlled data collection, can do a good deal to streamline the process.

II. BACKGROUND

In 1978, the Research Libraries Group began discussing the development of the analytical framework that could be used to share and compare detailed descriptions of collections and to identify libraries with particularly strong collections in specific subject areas. This collection evaluation tool was the RLG Conspectus, which serves as a means to create a composite map of existing collection strengths and current collecting intensities in participating libraries. (1)

In 1981, in response to a charge from the ARL Board of Directors, the ARL Task Force on Collection Development began investigating the use of the Conspectus for all ARL libraries. During 1981-1982, five non-RLG libraries—University of Cincinnati, Iowa State University, University of Manitoba, University of Notre Dame, and University of Wisconsin —participated in a study to test the feasibility of using the RLG Conspectus to build a data base of collection assessments in all ARL libraries. While the test demonstrated that the RLG Conspectus was an effective framework for analyzing collections, it also underscored the need for detailed instructions and procedural tools and documentation.

The ARL Task Force on Collection Development recommended expanding the RLG effort into a larger, broader-based North American inventory. In 1983, ARL endorsed a three-phased implementation plan for the North American Collections Inventory Project (NCIP).

During the first phase, July 1 to December 31, 1983, the ARL's Office of Management Services prepared the initial draft for this manual, developed training resources, and established a NCIP materials distribution center.

In the second phase of NCIP, which ran from January through December of 1984, the three ARL libraries in Indiana—Indiana University, The University of Notre Dame, and Purdue University —worked with the OMS to test and further develop these materials with the assistance of a grant from the Lilly Endowment.(2)

The third phase, supported by the Andrew W. Mellon Foundation, began in July 1985 and initiated the full-scale implementation of NCIP. Planning procedures, manuals and supporting documentation were made available to the library community by the Office of Management Services, which also provided trained librarians to assist research libraries in undertaking the assessments of their collections. During this period participation in NCIP steadily increased.

These three phases also played a critical role in determining the relationship between ARL and RLG in regard to Conspectus development and participation. The organizations signed an agreement defining ownership, use and access to Conspectus data, management of the data base, and pricing. Another section of the agreement clarifies issues of governance of the Conspectus development process. Since 1983 non-RLG librarians have participated in the development of the Conspectus through representation on the RLG Collection Management and Development Committee, Sub-Committee on the Conspectus. This Sub-Committee is responsible for coordinating development and revision of the Conspectus and its associated tools; approving the development of new divisions and other materials; and investigating further uses of the Conspectus. One valuable

result of the cooperation between RLG and ARL has been broadening the participation in developing the Conspectus materials.

The phased implementation set the stage for incorporating NCIP as an operational program within ARL/OMS. OMS will continue to support the implementation of NCIP. This support includes providing information and assistance to ARL libraries, training, distribution of NCIP materials (Conspectus worksheets, etc.), coordination of Conspectus data entry into the Conspectus On-line, and ongoing liaison with RLG.

The years 1983 to 1988 mark the passage through a crucial stage: development of the tools and resources and establishment of the general requirements, policies and procedures governing participation. They also set the stage for developing new strategies to strengthen North American research resources and for shaping the future directions of NCIP.

III. PURPOSE AND RATIONALE OF THE NORTH AMERICAN INVENTORY OF RESEARCH LIBRARY COLLECTIONS

The development of a North American inventory of research library resources can have great significance for research libraries and the scholarly communities which they serve. The basic objectives of NCIP were identified in the plan developed by the ARL Task Force on Collection Development in 1983. The following rationales were endorsed by the ARL Board of Directors and include:

- Describe the current and changing configuration of collection strengths in North American libraries (with the potential to expand internationally), contributing to the assurance of national coverage and the identification of lacunae;

- Serve as the basis for cooperative collection development programs and for distribution of responsibility for collecting, cataloging, and preserving materials, both nationally and regionally;

- Serve as an interlibrary loan and public reference tool, again both nationally and regionally;

- Provide a consistent tool for the development of institutional collection policies;

- Serve as a communication device for indicating changes in collection development policies, locally, regionally and nationally, and provide the capability to monitor North American collection development;

- Provide the capability to link collection policy to processing and preservation priorities, institutionally as well as by region or nationally;

- Provide information for determination of national, regional, and local needs in relation to possible fund-raising activities; and

- Stimulate changes in the way librarians and their clients think about cooperation.

During the intervening years participation in NCIP has steadily increased. These years mark the passage through the developmental to the implementation phase. The Conspectus has grown from an instrument developed within the Research Libraries Group libraries to a North American and even European inventory of research collections. The foundation has been laid and NCIP has built the means, or tool, and set the stage for developing new strategies to strengthen North American research resources.

IV. Description of the Conspectus

The basic framework and methodology of the North American Collections Inventory were designed by the RLG Collection Management and Development Committee (CMDC). The Conspectus which has been built in successive phases over a period of years. Some sections of the Conspectus were constructed by groups of specialized bibliographers; others were drafted by one bibliographer; all sections were reviewed by several other bibliographers and by members of the CMDC. The joint efforts of many subject bibliographers ensured that different attitudes and approaches were considered in building the Conspectus.

The Conspectus is arranged by broad subject divisions within the framework of the Library of Congress classification. Libraries undertaking the assessment of their collections use standard codes to describe existing collection strengths and current collecting intensities. In addition, language codes indicate language coverage and technical notes highlight special strengths, exclusions, or other features of particular collections. The Conspectus is organized around five interdependent elements, each of which plays an important role in structuring the collection analysis. These five are:

1. Library of Congress Classification

The Library of Congress classification contributes the basic framework and "provides the closest possible approach to a lingua franca for a consistent and accurate identification of subject fields."(3) The LC ranges in the Conspectus correspond to specific subfields within broader disciplines and create the basic building blocks for analyzing the collection. It is important, however, to recognize that a classified approach to collection analysis poses several problems. Some result from the inherent drawbacks of the Library of Congress classification system. This system was "designed to provide single-subject access to actual holdings of the Library of Congress at a certain point in time." (4) Given the complexity of adapting the classification system to steadily expanding knowledge, some current subjects are inadequately represented, others have been left out, and still others are scattered among different sections of the classification. For example, the classification fails to reflect the enormous expansion of computer science; it also omits references to the new field of bioorganic chemistry; and it scatters materials on women's studies among a number of schedules. Although all bibliographers have encountered these kinds of problems, it is important to recognize that no single, perfect classification system exists and that it seems clear that the LC classification is the best available tool to build the Conspectus. The developers of the Conspectus have, in any case, dealt with many of these problems through adaptations to the subject arrangement discussed below.

2. Subject Classification

The Conspectus is arranged hierarchically by broad subject divisions, subject categories, and subject descriptors. The subject divisions correspond to the major disciplines. (See appendix for a listing of available worksheets). Within each subject division, the major subfields of the discipline are broken out into subject categories. For example, the Music division of the Conspectus includes six subject categories: "General Music"; "Instrumental Music"; "Vocal Music"; "Literature of Music"; "Music Instruction and Study; and "Sound Recordings."

Finally, the subject categories are divided into detailed subject descriptors. Using again the example of music, the Conspectus contains 161 subject descriptors for this field. All subject

descriptors are derived from the Library of Congress classification schedules (occasionally augmented by other appropriate classification schemes) and are expanded and modified as necessary to describe the collections of research libraries. In constructing the Conspectus a strong effort has been made to use current terminology and to include terms for emerging fields. The subject descriptors are an integral component of the Conspectus and aim to define and describe the scope of each classification number and to remedy some of the inherent problems of its classified arrangement. In some cases subject descriptors alone are used when no corresponding Library of Congress classification number is available to adequately describe the subject. In other cases materials relevant to a given subject may be scattered among a number of classification numbers, and the subject descriptor will bring together all relevant materials.

Subject descriptors and terms, however, cannot always be defined with enough precision to ensure a common interpretation. Especially in interdisciplinary subjects, the exact meaning of a term may be difficult to define. A further concern of individual bibliographers may relate to the lack of specific subject descriptors in a subject field. The Conspectus aims to provide the detailed subject breakdown required to describe the diversity of research collections; however, a bibliographer may suggest additional breakdowns if they represent a significant body of research materials or a major area of scholarly research.

3. Levels of Existing Collection Strength and Current Collecting Intensity

Participation in NCIP requires establishment of collecting intensities for existing collection strength (ECS) and for current collecting intensity (CCI). Existing collection strength refers to the strength of the collection already acquired and available. *Current collecting intensity* refers to the level of effort (funding, exchange programs, subscriptions, etc.) that is presently being expended to build the collection. In the first case, the focus of the analysis is on retrospective holdings and the breadth and depth of the collections. In the second case, the focus of the analysis is on the current level of acquisitions.

Judgments as to the levels of the collection should be made from a universal perspective. To ensure meaningful comparability, assessments must be based on a broad understanding of the universe of existing publications and must match that universe to the subject parameters of the materials available in the library. The Conspectus uses a set of six codes to establish a standard terminology to express qualitative judgments regarding the collection levels. Because the purpose of the codes is to establish a "lingua franca" which promotes comparability and consistency, libraries must all use the same language to describe their collections. Listed below are the standard collection levels. These provide the standard terminology and structure. In addition, expansions may be used for local application. Most importantly, the standard collecting level definitions are amplified in the supplemental guidelines.

a. Standard Collection Levels

The following codes are used in describing existing collection strength (ECS) and current collecting intensity (CCI) within the Conspectus On-line. In assigning values for ECS and CCI, it is important to bear these points in mind:

- These values describe collections or collecting policies *absolutely*, not relatively. They assume therefore a national perspective and a broad cognizance of all facets of collecting.

- When the value describes existing collection strength, it should reflect what is actually on the shelves.

- When the value describes current collecting intensity, it represents *actual collecting practices,* and not *policy,* if that policy is being imperfectly observed.

- All applicable formats should be taken into account when determining subject values. This will mean considering such items as journals, audiovisual and other nonprint materials, technical reports, and so on. Particular strengths, weaknesses, special collections, or other outstanding or unusual factors should be indicated in the "Comments" section.

The levels are defined as follows:

0 *Out of Scope:* The library does not collect in this area.

1 *Minimal Level:* A subject area in which few selections are made beyond very basic works.

2 *Basic Information Level:* A collection of up-to-date general materials that serves to introduce and define a subject and to indicate the varieties of information available elsewhere. It may include dictionaries, encyclopedias, access to appropriate bibliographic data bases, selected editions of important works, historical surveys, bibliographies, handbooks, a few major periodicals, in the minimum number that will serve the purpose. A basic information collection is not sufficiently intensive to support any advanced undergraduate or graduate courses or independent study in the subject area involved.

3 *Instructional Support Level:* A collection that is adequate to support undergraduate and MOST graduate instruction, or sustained independent study; that is, adequate to maintain knowledge of a subject required for limited or generalized purposes, of less than research intensity. It includes a wide range of basic monographs, complete collections of the works of more important writers, selections from the works of secondary writers, a selection of representative journals, access to appropriate non-bibliographic data bases, and the reference tools and fundamental bibliographical apparatus pertaining to the subject.

4 *Research Level:* A collection that includes the source material required for dissertations and independent research. It is intended to include all important reference works and a wide selection of specialized monographs, special collections if appropriate to the field, as well as a very extensive collection of journals and major indexing and abstracting services in the field. Pertinent foreign language materials are included. Older material is retained for historical research.

5 *Comprehensive Level:* A collection in which a library endeavors, so far as is reasonably possible, to acquire all significant works of recorded knowledge (publications, manuscripts, other forms), in all applicable languages, for a necessarily defined and limited field. This level of collecting intensity is one that maintains a "special collection"; the aim, if not the achievement, is exhaustiveness.

b. Expanded Collection Levels

The collection intensity code structure for the *ALA Guidelines for Written Collection Policy Statements* (Chicago: ALA, 1988. Unpublished manuscript) subdivides levels 1, 2, and 3. The expansions into introductory (suffix a) and advanced levels (suffix b) can be used *locally* to describe non-research collections and to define collecting policies more explicitly for local assessments. For NCIP and for data entry into the Conspectus On-line, however levels 2a or 2b or 3a remain 2 or 3, with the suffix dropped.

While the development of the North American Collections Inventory is based on the principle of a commonality of understanding, the task remains for each bibliographer to interpret the common language of the codes and to apply them to specific library collections. This process of assigning an appropriate level to a segment of the collection is akin to the judgment and discrimination required to develop the collections themselves.

Both processes are in the final analysis "an informed art." Among the difficulties of establishing the collection level codes have been the lack of objective measurements for collection evaluation and the complexity of determining the accurate codes. Further problems have related to distinguishing among levels, particularly between levels 2, 3, and 4 where the gap may appear large, with some collections seemingly falling between the levels. Supplemental guidelines, described below, represent one approach to resolving these difficulties.

c. Supplemental Guidelines

To respond to the need for standardized approaches and assessment tools, subject-specific guidelines have been developed. These supplemental guidelines provide an overview of the nature of the subject and its literature and suggest appropriate standard guides, bibliographies, and periodical indexes for approaching the collection assessment. In the supplemental guidelines the standard collecting level definitions are expanded to indicate benchmarks or percentages of holdings for the subject from the suggested tools. For example, the *Supplemental Guidelines* for the Medical and Health Sciences Conspectus" suggests that a research level collection include at least 65 percent of the titles pertinent to the subject in *List of Journals Indexed in Index Medicus*. In another example, the "Supplemental Guidelines to Natural History and Biology Conspectus" indicates an instructional support level collection should include 90 percent of the titles pertinent to the subject in "Periodicals Indexed" appearing in the *Biological and Agricultural Index*. Collection development librarians from several North American research libraries have contributed to the design of the supplemental guidelines. The suggested benchmarks have been tested by several research libraries and reflect the consensus of a group of subject bibliographers. At present, the process of developing supplemental guidelines is still underway. Available guidelines are attached to their respective worksheets. While supplemental guidelines are not yet available for all divisions of the Conspectus, plans are underway to prepare additional instructions to accompany each Conspectus division. The supplemental guidelines facilitate objective, comparative collection descriptions and assessments, and their major value is that they support and reinforce bibliographers' judgments.

4. Language Codes

Language coverage is closely linked to the collection levels, and the representation of English and foreign language materials is a critical dimension in evaluating collections. Language coverage

qualifies and amplifies the collection values and frequently determines the appropriate collection level. Generally, the higher the reported level the broader the language coverage. For example, a collection in Italian history cannot be considered a research collection unless Italian language materials are extensively collected.

The primary purpose of the language codes is to indicate the language priorities and limitations that govern the library's collecting policies. As in the case of the collection levels, language coverage must be viewed within the context of the existing publications and must be based on an evaluation of the universe of publishing output in the field. This assessment should not be altered by the fact that in many fields English is the primary language for scholarly materials and the span of available foreign language materials will be limited. For example, a research collection in computer science will contain a relatively small percentage of foreign language materials due to the preeminence of English in the worldwide publishing output. At the same time, the absence of foreign language materials in such a collection would alter its scope and breadth. Through the use of language codes these differences can be reflected in the Conspectus. To that end, the following language codes are used in conjunction with the collection level codes:

E. *English language material predominates;* little or no foreign language material is in the collection.

F. *Selected foreign language material included in addition to the English language material.*

W. *Wide selection of material in all applicable languages.* No programmatic decision is made to restrict materials according to language.

Y. *Material is primarily in one foreign language.* The overall focus is on collecting material in the vernacular of the area.

5. Notes

There are three types of notes in the Conspectus: scope notes, comment notes, and preservation scope notes.

Scope notes are used at the subject category level to provide information about special collections or collecting policies which apply to more than one subject.

Scope notes may also be used to describe other policies, such as inclusion or exclusion of satellite libraries, to note changes in acquisition plans, to highlight significant microform collections, or to identify notable non-print collections.

Comment notes are used at the detailed subject level to indicate strong collections which make up only a portion of that subject, to note chronological and geographical strengths, or to highlight specialized collections and particular formats such as films, musical scores, or manuscripts. Conversely, notes may also be used to indicate geographical or chronological exclusions.

Preservation Scope notes are the newest enhancement of the Conspectus. These notes allow libraries to describe significant preservation projects, which are underway, completed, or planned for the future.

Special worksheets are available from OMS to identify preservation projects and to ensure that at least a minimum amount of information is included. In particular, the notes should include a description of the collection being preserved, the type of treatment proposed, as well as pertinent information about the project plans.

Preservation Scope notes will be added to the RLG Conspectus On-line to describe preservation projects that are in-progress or completed. Linked to Conspectus categories, the notes are retrievable on-line by keyword and category word searches: that is, **fin CTP Architecture** and **pres note** will retrieve all preservation scope notes for the architecture category. It is also possible to do division-level searches to locate all preservation scope notes in a particular division; e.g., **fin DVP Music#** and **pres note.**

V. DESCRIPTION OF THE CONSPECTUS ON-LINE

1. Procedures for Data Entry

The Conspectus On-line is mounted on the Research Libraries Information Network (RLIN) and contains collection assessment data for more than 7,000 subject descriptors in 24 broad fields. ARL and RLG have established guidelines for adding collection assessments from libraries participating in NCIP to the database. To facilitate the process, ARL's Office of Management Services coordinates the data entry of completed worksheets prepared by non-RLG ARL libraries. Accordingly, libraries participating in NCIP will submit their completed Conspectus worksheets to OMS.

a. Scheduling

Notify OMS as far in advance as possible when the library plans to submit data for input. To respond to RLG's scheduling needs, OMS will provide RLG every six months with a list of non-RLG ARL members planning to submit data including divisions and projected target dates. RLG's timeframe for completing data input is approximately 8–10 weeks after receipt of worksheets.

b. Submitting Completed Worksheets

Send one set of completed worksheets (either after the library completes at least one or more divisions or after completing all divisions) to OMS, attention: NCIP data entry. OMS will forward worksheets to the Research Libraries Group for data entry.

c. Worksheet Requirements

The completed worksheets for each division will contain the following data elements for each Conspectus line:

- collection level code for the existing collection
- language code for the existing collection
- collection level code for the current collecting intensity
- language code for the current collecting intensity
- scope or comment notes as appropriate
- preservation scope note as appropriate

The following additional points apply to the reporting of local data for input into the Conspectus On-line:

- Fill in values for every line of each Conspectus worksheet. Use zeros if the library has no collection to report. N.B.: zeros will be entered for each blank line at the time of input.
- Only one numerical code can be assigned for either existing collection strength or current collecting intensity. The alphabetical suffixes may be used only for local use; they will not be

entered into the database. Thus 3a or 2b will be input as 3 or 2 only.

- Give the complete wording of each note at its appropriate location. For example, do not use ditto marks or "see note for line X."

In addition, provide the name, telephone number and E-mail account (if available) for a contact person.

d. Proofing Data

At the time of first data entry into the Conspectus On-line, RLG will establish a library identifier (LI), if none exists in RLIN. A library identifier is a four-letter code uniquely identifying the library contributing the collection assessment data. After data entry, RLG will return worksheets to the library for proof-reading. Libraries will indicate revisions and changes on worksheets and return them to RLG. Proofed worksheets will be returned directly to RLG. Libraries will receive a corrected, final printout of their entered data.

e. Rates for Data Entry (Effective July 1, 1988)

The charges for data entry will be based upon the cost of processing 100 records. A minimum charge for processing 100 records will be required each time data are entered. Rates for data entry effective in 1988 are:

100 records	$ 25.25
Entire Conspectus	approximately $ 2,000
OMS handling charge per shipment	$ 25.00

f. Billing

RLG will bill OMS monthly for all data entry. NCIP libraries have two options for handling the charges for entering collection assessment data into the Conspectus On-line.

i. Establishment of a Deposit Account

OMS will provide a deposit account service for NCIP libraries. This allows NCIP libraries to deposit the estimated amount for Conspectus data entry and avoids multiple payments. OMS will issue account statements as bills are received from RLG.

ii. Prepayments

Libraries can also decide to include the required payment with each shipment of completed Conspectus worksheets. See the NCIP price list for details.

2. Access to Conspectus On-line Database

Libraries participating in NCIP can access the Conspectus On-line through dial-up and a search account. CLASS (Cooperative Library Agency for Systems and Services)provides search-only access to the Conspectus On-line for non-RLG member institutions. To get this service, the first step is to contact the CLASS Marketing Service at 408-289-1756.

The second step is to sign an agreement for RLIN search-only services with CLASS. The agreement explains the services provided by CLASS and details the charges and billing procedures. The library will then be given a RLIN account and a special password.

Finally, the library needs to determine how to gain access to RLIN with your dial-up modem. There are two ways to reach RLIN through dial-up. The first is direct dialing to Stanford, California. This method is only advisable if the library is in the 415 area code, or if the staff plans to access the Conspectus On-line infrequently. The charges are the long-distance telephone costs from your library's area to Stanford, California. The second method is to reach RLIN through the communication network, Telenet. This requires a Telenet account dedicated to RLIN. CLASS will make the necessary arrangements and include the Telenet charges on its monthly bill.

Effective September 1, 1988 the CLASS rates are:

1. Annual CLASS subscription fee (required basic fee)	$ 135.00/year
2. Search-Only Service First Year Service Fee (this covers account opening and documentation)	$ 175.00
Subsequent Annual Service Fee	$ 50.00
3. Connect Hour Rates	$47.00/hour
4. Telenet charges	$10.00/hour
Monthly service fee	$4.00

CLASS will bill the library monthly. CLASS also provides a deposit account payment option. For more information, please contact the CLASS Marketing Service at (408) 289-1756, 1415 Koll Circle, Suite 101, San Jose, CA 95112-4698.

Once the library becomes an authorized user, simply dial a local Telenet number to make the connection to RLIN. You will be given user-specific instructions for logging on, which guide you through the steps for reaching RLIN. After entering the RLIN account code and password, the system prompts "Command>", to which you respond **cal rlin** followed by **Con.** You have now reached the Conspectus On-Line. A quick guide for searching the Conspectus On-line database is the reference card: *Conspectus Searching Basics.* A summary of the searching basics is given below:

3. Conspectus On-line Searching Basics

The file can be searched interactively. Access points include subject words and phrases, institutions, Library of Congress classification numbers, and collection levels. In this special data base it is possible to retrieve data from several different divisions of the Conspectus by searching for index values common to all of them. For example, one command to find records containing

collection data for the Renaissance will draw a result from the Art and Architecture; History; Linguistics, Languages, and Literatures; Music; and Philosophy and Religion divisions of the file.

a. Beginning a Search

When you see the first screen of RLIN news, you can begin searching. You must tell the system two things:

- which index you want to use in the search, and
- the value you are looking for.

The basic command is:

Fin <index> <value>

The *indexes* for the Conspectus On-line reflect the organization of the printed Conspectus. The most useful index for the casual user is keyword searching.

The *value* indicates the actual subject, phrase or word used. For example, to find out about labor economics collections, the command is:

Fin KW labor economics

b. Using Indexes

In addition to keyword searching, commonly used indexes include:

Division Phrase	**Fin DVP**
Category Phrase	**Fin CTP**
Category Word	**Fin CTW**
Subject Phrase	**Fin SP**
Subject Word	**Fin SW**
Area Studies	**Fin area**
Note Fields	**Fin com**
Library of Congress Classification number	**Fin cls**
Existing Collection strength	**Fin ecs**
Current Collecting intensity	**Fin cci**

Searching with Subject Indexes (SP,SW)

- use these when you know the LC subject heading

Searching with Area Index

- use this to retrieve records from area studies conspectuses: Latin America Conspectus; the

Computer Science Conspectus, and the Africa Conspectus update

- use this to apply exclusive or inclusive modifications in a search: fin area latin# and kw history; or fin dvp econ# and not area latin#

Searching with Com Index

- use this to retrieve records with comments or scope notes (N.B. Scope notes are indicated by asterisk)

- use this to pinpoint collecting patterns across fields of knowledge, e.g. fin com arab# would give you every record in which an institution highlighted its Arabic collecting

To see all available indexes, give the command:

Show Ind

c. Looking at Search Results

Displays and what they show:

MULtiple - record's heading, LC class number, and record ID
LONg - single record display

Display you see first—depends on number of records in the search result:
1 LONg single-record display
2–7 MUL display
8 MUL prompt; accept or type over it

Displaying records:

If you want to look at a specific record in a multi-record result, the command is:

dis 1

The system will begin with the first record. To move to the next record, give a + command.

d. Modifying a Search (And, Or, Not)

To narrow or expand a search, you can use the logical operators and, or, not. For example, to narrow a search to African studies, you would use the command:

Fin KW languages and area africa

Add-on searching can be done using any of the indexes:

AND narrows search **fin dvp music and sp vocal#**

OR (expands search)	**fin ctw visual or sw museums**
NOT (narrows search)	**fin dvp music and not sw sacred**

e. Truncating Words

You may truncate (#), to retrieve all records that begin with the initial characters that you specify. For example, using truncation for **Europ#** will retrieve records with "Europe" and "European".

f. Limiting Searches

To limit the display of collection data to a particular collection level, use the command:

set level <collection level>

For example, to display only level 5 collections, use the command:

set lev 5

To cancel this limitation, use the command:

set lev all

To limit the display to a specific library, use the command:

set view <RLIN library identifier>

For example, to display only Dartmouth College Library values, use the command:

set view NHDG

To cancel, use the command:

set view all

g. Browsing

To look through a series of entries, you may want to use the command:

bro <index> **fro** <starting point>

For example, to see a list of entries related to Africa, give the command:

bro ctp fro africa

N.B. The browse option is available only for the Division, Category Phrases, Area, and Subject Phrases indexes. It is not available for the other indexes, such as keyword.

h. Ending the Search

To conclude the search, give the command:

logoff

4. Printouts of Conspectus Data

In addition to the online access, printouts of the data for each contributing library or for a statewide or regional group of libraries are available. The printouts can be used in a variety of ways. Some bibliographers make printouts of the library's data for the subjects for which they are responsible, thus bringing together all aspects of a given subject. Other bibliographers use printouts of the data of a specific group of libraries to aid them in relating selection decisions to collection strengths at other libraries. Still other bibliographers use the printouts for a specific subject as the starting point for preparing written local collection development policy. Printouts are available in paper or on microfiche.

a. Formats

NCIP participants may obtain print-outs of data in three standard formats:

- Format I — data for library only
- Format II — data for all reporting libraries
- Format III — data for designated libraries

Printouts should be ordered directly from RLG:

Christina Kasson
RLG Publications Coordination
The Research Libraries Group, Inc.
1200 Villa Street
Mountview, CA 94041

(415) 962-9951

b. Rates for Printed Conspectus Reports,

Rates effective in 1988 are:

	Paper	Microfiche
• Format I — data for one library:		
single Conspectus division	20.00	not available
entire Conspectus	175.00	100.00 plus 5.00 per fiche
• Format II — data for all reporting libraries:		
single Conspectus division	25.00	not available

• Format III	—all Conspectus data for:		
	one library	175.00	100.00 plus 5.00 per fiche
	two to four libraries	275.00	
	five or more libraries	375.00	
• Handling	(per order, regardless of number of Conspectus divisions or reporting libraries involved)	10.00 plus postage	10.00 plus postage

5. Revisions of Conspectus Data

There are *two* types of revisions. The first is the result of revision of the Conspectus worksheets. While this work is still underway, several revised documents are scheduled for completion in 1988. It is, however, altogether likely that many Conspectus participants will find a reevaluation or reassessment inopportune within the general timeframe given for such changes. The following general procedures to be followed for such changes are:

a. Distribution of Existing Data

When a revised Conspectus division is distributed, a copy of each NCIP library's existing data will be sent to OMS. OMS will redistribute the printouts of affected worksheets to the library. Included will be a timetable for resubmitting the updated worksheets. NCIP libraries will submit revised worksheets to OMS.

b. Loading of New Data

The new Conspectus data will be loaded into the file all at once, replacing on a predetermined date, all the existing conspectus data.

The date on which the old data will be unloaded and the new data loaded will be announced at least six weeks in advance. Along with that announcement a list of line deletions/changes will be provided. This will give institutions the opportunity to request batch products of old data if they choose to follow a different schedule. It is important to underscore that once the deadline for submitting Conspectus assessments for revised divisions has passed, the libraries' old data will be dropped unless it mirrored the revision. Only that data which translates DIRECTLY from the old Conspectus will be moved automatically into the new. That is, if the Conspectus line, as defined by LC class and subject descriptor, remains unchanged then the data will move across automatically. This will be the default action.

The second type of revision is initiated by the library. As part of a library's ongoing collection evaluation program, there may be a need for revising or removing collection assessment data. The process and the rates will be the same as for original entry.

VI. PREPARATION FOR PARTICIPATION IN THE NORTH AMERICAN COLLECTIONS INVENTORY

1. Decision to Participate

The decision to participate in the North American Collections Inventory needs to be based on several factors. While the project will involve considerable effort on the part of collection development staff, its potential benefits are substantial.

The 1986 NCIP Survey showed that ARL libraries already participating, or planning to participate, identified the following reasons for their decision:

- To identify collection strengths and weaknesses: 53 libraries (77%)
- To participate in cooperative collection development: 47 libraries (68%)
- To develop skills and knowledge of staff: 45 libraries (65%)
- To develop consistent collection policies: 40 Libraries (58%)
- To contribute to the North American data base: 37 libraries (54%)
- To link local collection efforts to other libraries: 31 libraries (45%)
- To strengthen budget presentations: 31 libraries (45%)
- To improve faculty understanding of collections: 30 libraries (43%)
- To support cooperative preservation efforts: 30 libraries (43%)
- To strengthen grant proposals: 25 libraries (36%)
- To support cooperative retrospective conversion: 19 libraries (28%)

The library must, however, consider the costs involved in obtaining these benefits through participation. The major cost will be the time of selectors and/or bibliographers needed to work through the Conspectus. While this is difficult to estimate, because of variations in staff experience and bibliographic expertise, an average of 25 hours per division of the Conspectus is a reasonable expectation. There is, however, flexibility in schedu'ing the work over varying periods of time. There are also some costs involved in providing training and assistance to staff and some costs for materials and for entry of data into the Conspectus On-line.

Normally, the decision to participate would be made by the Director after consultation with appropriate staff, faculty and administrators. The decision can be facilitated by reviewing documents on the Project, including this manual, and by having OMS staff or collection development staff from

previously participating libraries meet with the staff and interested faculty to discuss their experiences with the project.

Finally, the library can consider two general options for approaching the project. Depending on factors like the number of staff actually involved in collection development, the complexity of its organization, the role and interest of faculty in collection development, and the level of staff interest and bibliographic expertise, the library may choose to work through the entire Conspectus more or less simultaneously, or to stagger the schedule for completing major Conspectus divisions.

One approach for contributing to NCIP is the completion of the entire Conspectus. Research collections are complex systems and are most comprehensible when considered as an organic whole rather than individual parts. Furthermore, the complete coverage of the Conspectus allows detailed and systematic collection assessments measuring strengths and weaknesses of the total collections. A further advantage of this approach is that it makes possible comparison with the assessments of other libraries. At the same time it is recognized that the dimension, complexity, and size of research collections make this approach labor intensive and costly. On balance, libraries that have undertaken the complete analysis of their collections have realized long-term benefits.

The assessments required for NCIP allow libraries to build on that effort in a variety of ancillary ways and to enhance their collection management process. Not only were strengths and weaknesses in the collection identified, but the bibliographers found that they had gained a better understanding of the collection areas assigned to them, increased their knowledge of collection evaluation techniques, and developed a greater awareness of library-wide resources.

However, under certain circumstances a library may elect to undertake assessments for selected divisions of the Conspectus only. For example, a library with minimal collections in science and technology may decide not to complete these divisions of the Conspectus. For the library there are three advantages in this limited approach. First, it allows a library to focus assessment efforts on the most significant parts of the collection. Second, it provides the library with experience upon which further assessment efforts can build. Third, it reduces staff time and effort. Since libraries with specialized collections may find that the costs of data gathering for some Conspectus divisions are greater than the benefits to be derived from the collection analysis of these fields, this limited participation will allow at least the reporting of major collections in NCIP. One limitation is the fact that the analysis of the total collections is more likely to identify problem areas and provide in-depth knowledge of the collections. Equally important is the problem of identifying divisions which will be omitted. For example, a decision to exclude the law division would also omit analysis of tangential areas such as religion and law and primitive law.

Having decided to participate in NCIP, the library must then arrange to receive the necessary worksheets, manuals, supplemental guidelines and verification studies. These are available through the Office of Management Services. The OMS is also responsible for keeping RLG informed of the status of participant libraries and their general schedules. It is important that libraries keep the OMS informed of their plans so that the necessary planning for data input can be carried out.

Finally, the library needs to decide whether it will start an RLIN search-only account, which would

provide access to the Conspectus On-line, which can be a useful resource in carrying out the assessments by providing comparable data from other participant libraries.

2. Organizing for the Project

Each library needs to identify the appropriate approach to organizing for the project. Its choice will depend on a variety of factors, including: its staffing level and pattern for collection development; available time of bibliographers and/or selectors to work on the project; duration of the project, etc.

The major options for organizing Conspectus projects include:

- forming a project team, or task force, chaired by the head of collection development;
- designation of the head of collection development as project manager;
- designation of an existing collection development committee to plan and manage the project;
- forming subject teams composed of selectors and possibly public or technical services librarians. Whichever general organizational approach is taken several managerial tasks will need to be carried out. These include:

a. Select Conspectus Sections

Most libraries will wish to complete at least those sections which support major programs on the campus, or those which are historically strong. Selection of Conspectuses will depend heavily on these factors:

i. availability of a recently revised Conspectus;

ii. availability of supplementary guidelines. These make a great deal of difference in bibliographers feeling comfortable with the task and provide a useful introduction to the Conspectus subject area;

iii. availability of knowledgeable staff and/or faculty.

b. Identify Staff

While typically one person might be expected to take overall responsibility for completing a section of the Conspectus, frequently several selectors or bibliographers will contribute to the assessments and their work will need to be coordinated.

c. Assign Responsibilities

At least the major tasks of completing the Conspectus need to be identified, assigned and scheduled. These include whatever data gathering needs to be done, the assigning of ratings to the collection, and the completion of worksheets for internal review.

d. Provide Training

In some instances, the library will wish to consider providing student staff to assist in checking lists, measuring shelf lists, etc. Most libraries also find it useful to provide opportunities for selectors and bibliographers to meet periodically to share their experiences, problems, and successful techniques in working through the Conspectus.

e. Monitoring the Project

As selectors and bibliographers work through sections of the Conspectus, the project task force and/or collection development officer and staff will want to monitor their progress and be prepared to respond to questions and problems arise. On one level, this will involve working to keep the project on schedule and ensuring that selectors are provided with the necessary tools and resources to complete the worksheets. On a more substantive level, it will involve providing opportunities for those working on the Conspectus to meet periodically to review progress, discuss problems,and share approaches to the process which have been successful. Members of the task force can contribute to this process by organizing and participating in formal review sessions and providing resources and support, as appropriate.

f. Maintaining Liaison with the OMS

The OMS needs to be informed of a library's plans for participation in the Inventory and can provide a variety of resources. OMS provides the Conspectus worksheets to the library and, coordinates entering the library's data into the Conspectus On-line.

g. Reviewing Results

The task force also needs to develop a process for reviewing the draft worksheets before they are finalized and submitted via OMS to RLG for inclusion in the Conspectus On-line.

Draft results need to be considered relative to other collections at the library and relative to collections nationally. Either the task force, or a small group of bibliographers, should review all results and be alert to possible inconsistencies, or tendencies to over- or under-rate collections. Interested and knowledgeable faculty can also play a role in this review and their perceptions can help confirm selectors' judgments, or raise questions. Also, since the judgment of *Current Collecting Intensity* is, de facto, the library's collection policy, this is an opportunity to test that policy with faculty for accuracy and acceptability.

In most libraries, staff with ongoing responsibilities for the development and maintenance of the collection will play the key role in the project. They will assess existing collections, determine current collecting policies and complete the Conspectus worksheets. The time and effort involved in these tasks will vary according to the breadth of collection being assessed by an individual and that individual's experience and background. In addition, the assessment methodology chosen by an individual will affect the time required (various assessment methodologies are discussed later in the Manual).

In those libraries in which faculty play a major role in collection development, they will need to be involved in the process and may, in some instances, need to complete the worksheets—at least in draft

form. Many libraries have found this Conspectus to be a very effective communication channel to the faculty. It is strongly recommended that faculty at all participating institutions be informed of the project and its goals and potential benefits. In most libraries they can also assist selectors and/or bibliographers by presenting their perceptions of the collections and by reviewing draft worksheets. Faculty involvement is particularly important in building their understanding of and commitment to the concept of a North American Inventory of Research Collections as a useful tool to further their research efforts.

3. Planning Project Goals

Whether planning is carried out by a task force, or by the chief collection development officer, an initial step is to develop project goals, priorities and key deadlines. These considerations would include deciding on how much of the Conspectus will be done, and which subject divisions would be completed first. In determining deadlines for the project, several factors need to be considered, including:

- number of staff to be involved and their current workloads;
- nature of existing documentation on the collection (e.g. assessments and policies);
- desirability of completing the project in a timely fashion;
- need to provide sufficient opportunities for review of results and discussion of the process by staff.

The project task force or collection development officer also needs to identify specific tasks to be carried out, including those related to communicating and publicizing the project to faculty and administrators and those related to the actual completion of the worksheets. It will be useful to specify at the beginning of the project what tasks need to be carried out as well as which staff will carry them out and when they might be completed.

VII. TRAINING AND ORIENTATION

Libraries can choose among several training options. These range from local, one- or two-day sessions to two- or three-day cooperative, regional workshops. All workshops share a core agenda and they are designed to provide an introduction to the North American Collections Inventory Project; to give participants practical, hands-on experience in completing Conspectus worksheets; to survey major methodologies for evaluating collections; and to suggest ways by which an effective collection assessment project can be carried out. A special feature is the onsite practice assessments. This hands-on experience in completing a sample worksheet ensures a common basic understanding of the Conspectus methodology. It also provides an opportunity to discuss difficulties encountered in undertaking the assessments and to share insights, special problems, and effective strategies. The workshops are intended for selectors and bibliographers who will be carrying out the Conspectus-based assessments. These are designed and operated by OMS staff or OMS-trained librarians from various geographic parts of the country and can be arranged by calling the OMS. While each local workshop will be designed to meet the specific needs of the library, typical topics include:

- Introduction and overview of NCIP
- Collection assessment techniques
- Conspectus methodology
- Analysis of practice assessments
- Strategies for overcoming problems
- Action planning/implementation of a Conspectus project

The cost of local training workshops is dependent on the length, the number of participants and trainers and travel expenses for trainers. The estimated cost for a one-day workshop conducted by one OMS staff member or OMS-trained librarian would be $600 plus travel expenses.

The OMS has also designed brief orientation sessions for library staff and interested faculty and administrators. It is also possible to have the OMS work with the library's task force or collection development officer in developing a plan for the project.

Another option is a cooperative, two-day or three-day training workshop. This workshop provides an opportunity to work on a statewide or regional basis and to initiate exploration of cooperative approaches to collection management and preservation of resources. The core agenda is expanded to explore issues centered around interinstitutional coordinated collection development, including planning, potential cooperative activities, and model approaches. Three-day workshops typically have a component on providing training to staff.

Cooperative workshops offer potential savings over the cost of local workshops. The cost of the workshop is dependent on the length, number of participants, and travel expenses. Typically, a

cooperative workshop would be conducted by two OMS staff members and/or NCIP consultants.

Whether or not the resources of the OMS are used, the project should be introduced to staff and faculty and a process for providing detailed training to bibliographers and selectors should be developed. It will be particularly important to provide an opportunity for staff to raise questions which will develop as they work through the worksheets.

VIII. COMPLETING THE WORKSHEETS FOR THE CONSPECTUS

Libraries undertaking the assessments of their collections for NCIP report the results on separate worksheets for each subject division in the Conspectus. Completing the worksheets requires a number of interrelated tasks: review of existing documentation; survey and assessment of the collection; establishment of collection intensity and language codes; final preparation of library-wide Conspectus divisions; and reporting of results to RLG for input into the Conspectus On-line. A listing of these tasks and an example of a completed worksheet page are included in the Appendix. Generally, the process of completing the worksheets for a Conspectus division includes five distinct phases: preparation; assessment of the collection; review of assessments; reporting results; verification of results.

1. Preparation

The essential steps are to review the Conspectus division, the accompanying supplemental guidelines (if available), the Manual and other orientation resources.

A bibliographer beginning the collection assessment for a specific division of the Conspectus should also become familiar with any collection development statements which the library has previously prepared. While the structure and the details may differ between local policies and the Conspectus, the assessments for NCIP can build effectively on local policies. If no policies exist, past collection assessments may have been undertaken, and the bibliographer can use these as reference points.

In addition, the bibliographer should look at academic programs, curricular emphases, or other factors which shaped the collection in the past and which influence current acquisition policies. This investigation would identify the user population, degree programs, the scope and special foci of educational and research programs, and related interdisciplinary studies. This will not determine Conspectus values per se but will provide a comparative context for later analysis.

2. Assessment of the Collection

The goal is an in-depth assessment of the collection—that is, a careful determination and evaluation of its scope, depth, and quality. Several assessment methods exist and their advantages and disadvantages are discussed in Section X of this manual. In most libraries the choice will be a compromise between extensive assessments that could be done under ideal circumstances, and the basic assessment necessary to complete the worksheets. Underlying the assessment of the collection for NCIP is a general process that involves three components: information-gathering, interpretation and analysis, and establishment of collection levels, language codes, and notes.

a. Information-gathering

Several kinds of information about the collection are essential in determining its depth and breadth. To complete the worksheets, the bibliographer must determine the characteristics of the collection, including types of materials collected, currency of publications, presence of primary sources, foreign language materials, and special treatments. Obtaining this information may

involve scanning the shelves, list-checking, interviews with faculty members, or a review of approval plans and exchange programs.

In some libraries the data-gathering will focus on obtaining hard data, such as number of volumes or percentages of holdings in standard lists. In other libraries the information gathering effort will focus on soft data, such as faculty impressions of the quality of the collection. In all libraries the purpose of the data-gathering is to identify the depth of the collection, to determine geographical, chronological and language emphases or limitations, and to pinpoint changes in the historical development of the collection. Taken together, this information provides the bibliographer with a basis for determining collection intensities.

b. Interpretation and analysis of the data

In interpreting the information gathered about the collections, it is important that the bibliographer describe them relative to national collections and not just relative to local programmatic needs. To ensure valid comparability, assessments should be based on a broad understanding of the universe of existing publications. This requires cognizance of the bibliography in the field, understanding of the holdings of the largest and best collections, and knowledge of current publications and the booktrade. Several important tools can assist bibliographers in this process. The first is the supplemental guidelines which have been developed for use with selected conspectus divisions. These guidelines expand the general collection level definitions and identify benchmarks for checking the quality and quantity of local collections against standard bibliographies, literature guides, or serial lists. (A sample supplemental guideline is included in the Appendix). The second tool is the RLG Conspectus On-line which records the collection levels of other research libraries. The third is the library of Congress shelflist on microfiche. "For most subject fields, this provides a kind of 'universe' for quantitative, qualitative, and language comparisons" (5). Still another is the National Shelflist Count reports which provide an opportunity to compare local shelflist measurements with those reported by research libraries (6). Taken together, these tools offer a general framework within which the bibliographer can consider the library's specific collections.

As a further context within which to assign specific collection codes, it is useful to analyze the nature of the subject literature and the types of materials which would be contained in a level 2, 3, 4, or 5 collection. For example, an instructional collection on the French Revolution would differ from a research collection in language coverage, availability of primary sources, and age of materials.

The assessment of the collections requires a set of judgments roughly analogous to those involved in actually developing the collections themselves. In general a bibliographer will strike a balance between relying on his/her judgment and other personal perceptions and using quantitative data. Obviously a bibliographer with long familiarity with the collections can depend primarily on that knowledge to establish the appropriate levels for the collections. On the other hand, a bibliographer with little experience in building the collection can increase the accuracy of his/her judgments through the use of quantitative data.

c. Establishment of Collection Levels, Language Codes, and Notes

Collection Levels

The most challenging task for each bibliographer is the establishment of collection codes. Experience suggests that the following strategy may prove useful: first, establish the codes for current collecting intensity (CCI) basing it on present selection policies, budget data, and general knowledge of recent collection intensity. It is important that the values represent actual collecting practices, and not policy, if that is somewhat wishful; second, establish the codes for existing collection strength (ECS) levels on the basis of a combination of quantitative data and judgment; third, after a preliminary run-through, reexamine areas of particular strength, uneven collecting patterns, or where questions arose.

Language Codes

Language codes are used in conjunction with collection intensity indicators to signify the language priorities and limitations governing the library's collecting policies. Although English is the primary language for scholarly materials in many fields, as, for example, computer science, the absence of foreign language materials may alter the scope and breadth of a collection. The use of language codes allows these differences to be reflected. The four language qualifiers discussed below are used to indicate the variety and scale of language coverage.

E—*English language material predominates.* Little or no foreign language material is in the collection.

The question of the validity of designating a collection 4 E has been raised repeatedly. While the Conspectus On-line records several instances of 4 E collections, there must be compelling reasons for assigning such values. Such collections are more frequent in the science, with Biology and Medicine being strongly represented. In contrast English-only research collections are the rarity in the humanities.

F—*Selected foreign language material included in addition to the English language material.*

In a collection with a "F" designation materials are selected according to language. For example, in a European literature collection with an "F" designation European and English language materials are collected more intensively than those in other languages. Such a collection is by policy restricted primarily to directly relevant languages, and English language materials are disproportionate to the actual numbers of English language works that represent the entire field of publishing in a given subject.

As another example, in the area of Western religious studies it could be assumed from the "F" designation that the bulk of the collection would be in English, including a well selected group of materials published in German, French, Greek, Hebrew, Aramaic, and Latin, as well as a small amount of materials in other Western European and Near Eastern languages. It is even possible, in some subject collections with an "F" designation, that the actual volume count of foreign language materials would outweigh those in English. The essential point to remember

is that the collection is limited to certain languages and that English language materials are collected more extensively than those in other languages. (7)

W—*Wide selection of materials in all applicable languages.* No programmatic decision is made to restrict materials according to language.

In a collection with a "W" designation there are no language exclusions by policy. English language materials do not dominate but are present only in amounts representative of, and proportional to, the whole field of publishing in a given subject. Such a collection has no language priority and materials are collected in all languages significant to scholarship in the field.

Using again the example of Western religious studies, a collection with this designation would suggest a wide range of materials in English, the Romance, Germanic and Semitic languages, as well as Latin, Greek (ancient and modern) and other appropriate Indo-European languages, and, quite possibly, works in languages outside of Europe and the Middle East. (7)

Y—*Material is primarily in one foreign language.* The overall focus in on collecting material in the vernacular of the area.

A collection with a "Y" designation contains primarily those materials published in the languages of a particular geographic area outside of the English-speaking world. While such a collection might contain some items in English or other Western European languages, these latter would represent only small, well selected segments of the overall collection. Overall the focus is on collecting materials in the vernacular of the area.

For example, in the field of economic history of East Asia, it would suggest a collection dominated by materials published in Chinese, Japanese, and Korean. (7)

Notes

Bibliographers may use two types of notes: general scope notes and more specific comment notes.

SCOPE notes: Used at category level to describe:

- Special Collections
  -subject
  -format

- Two or more subjects or libraries
- Inclusion/exclusion of satellite libraries
- Changes in collecting policy

COMMENT notes: Used at subject level to describe:

- Strong sub-collections
- Chronological or geographical strengths/exclusions
- Special collections
- Special formats
  -films
  -scores
  -manuscripts

3. Assessment Issues

During the assessment questions will arise regarding the interpretation and application of the Conspectus procedures. The Conspectus has been envisioned from the outset as an adaptive, evolving tool. Because the Conspectus has been built in successive phases, there have been opportunities to anticipate some questions and to develop additional tools and strategies in response to problems encountered by the participating libraries. In the process a body of shared experience has evolved upon which libraries can build. Questions and concerns which have been raised repeatedly center around the following areas:

a. Conspectus format and content

In working with Conspectus worksheets, several questions concerning the format or content may arise. One question is: Why are broad LC classification numbers seemingly omitted? The answer is twofold. In some cases the LC classification schedule excludes number ranges. For example, in the QD schedule there is a break between QD731 (Special substances in photo-chemistry) and QD901 (chrystallography periodicals). In other cases the existing LC classification numbers have been telescoped to reflect broader subjects. In both cases, a look at the LC class schedule will resolve the problem.

A second question is: What is the purpose of the broad class numbers? Several Conspectus divisions use the concept of "global subjects"—that is subject lines designed to act as broad indicators of collection intensity encompassing several detailed subjects. For example, the Physical Sciences division includes broad subjects such as "QA1-99. Mathematics, General" or "QB1-139. Astronomy, General" that are further divided into detailed subjects. Bibliographers should first establish overall collecting levels for the broad subjects and then the levels for the more specific subjects.

Bibliographers using the Conspectus may encounter two additional types of problems. The first is minor editorial problems, such as misprints, inconsistencies in the LC classification number, or errors in the class numbers. To ensure correction in future worksheets, bibliographers should send a correction note to the OMS to be forwarded to RLG.

The second type of problem centers around broader philosophical questions concerning lacunae, specific subject descriptors, and the level of specificity. While the Conspectus aims to provide sufficient refinement of classification numbers needed or interinstitutional comparison, the breakdowns may appear too broad or too detailed when applied to a library's specific collection.

One possible solution to this problem is to indicate perceived omissions in the note field. For example, a library with a strong collection in German expressionist literature could indicate this collection in the broader conspectus line: German literature—Twentieth Century.

b. Dewey Classified Materials

It is recognized that many research libraries have partial or even complete holdings classed in Dewey or other classification schemes. The experiences at ARL Libraries, where all collections are classed in Dewey, suggest that it is frequently impossible and usually not worth the effort to attempt a precise conversion from LC to Dewey. Instead of equating all LC class numbers to Dewey, bibliographers used general translation tables as a guide and focused primarily on the subject descriptors. Many bibliographers also consulted the LC classification tables and LC shelflist as aids in defining the "universe of resources" appropriate for specific lines in the Conspectus.

c. Periodicals

After careful consideration of the advantages and disadvantages of breaking out periodicals as separate lines in the Conspectus, the policy decision has been not to do so. The rationale is that all types of literature must be considered in evaluating a particular subject area; thus, periodical literature should be considered in the context of a subject, rather than evaluated separately. The notes field can, of course, be used to indicate particular strengths or weaknesses for periodical literature.

d. Area Studies

Area studies are integrated into appropriate subject divisions of the Conspectus. This integration ensures that area studies are considered during the assessment of subject collections. It also eliminates potential discrepancies between values assigned by subject bibliographers and area specialists. To facilitate the assessment of area studies, separate worksheets have been developed for Latin America, South and East Asia. These area updates are merged into the appropriate division of the Conspectus upon completion of the worksheets. Yet information related to specific areas such as East Asian or Latin American studies can be easily obtained through an online search or a printout from the Conspectus On-line, and collections assessments relating to a country or an area can be compiled from the relevant subject area in all conspectus divisions. For example, materials dealing with Latin American studies are found in several Conspectus divisions, including history; linguistics, languages and literatures; and philosophy and religion.

e. Role of Machine-Readable Databases and Access to On-line Services

Although the advent of new technologies is beginning to shift the emphasis in research libraries from the ownership of resources to the ability to provide access to them, it is important to consider their impact on collection assessment.

Access to online full-text data bases and resource files is becoming more pervasive. But ownership of library materials continues to be an important criterion because measures relating to ownership (for example, serial subscriptions) are indicative of the depth and vitality of research libraries. Also, locally owned material is typically more accessible to library users.

Clearly, collections are undergoing changes and it is evident that the gradual evolution of a bimodal environment that encompasses both locally held print resources and online access to electronic formats will lead to reexamination of the issue of ownership of information versus access to information. In the interim, apply the following guidelines:

If use of online databases is an alternative to previously purchased hard copy resources and if access is provided to users free or at minimal cost, online databases should be considered in the assessment.

f. Treatment of specialized formats such as archives, audiovisual materials, sound recordings, maps and atlases, microforms, and databases.

The goal of NCIP is to assess all relevant library materials regardless of format. All specialized formats should be considered when the appropriate subject collection is assessed. For example, the microform set of Victorian fiction should be taken into consideration when determining the collection level for nineteenth-century English literature. Particular strengths in specialized formats may also be indicated in comment notes. Recognizing the importance of maps and atlases, a separate Conspectus on cartographic materials has been prepared to provide comprehensive information on these resources.

g. Treatment of documents of intergovernmental organizations and national governments.

Government documents should be considered when providing collection levels for appropriate divisions of the Conspectus. For example, completing the worksheets for the Law division requires careful consideration of national and international government documents. Similarly, government documents must be considered in completing the Political Science and Economics and Sociology division. But recognizing the need for detailed information on government documents, a separate conspectus division for intergovernmental organizations and national government documents has also been prepared. In all cases the completed worksheets should reflect the library's total holdings of government documents, not just those collections housed in a government documents department.

h. Inclusion of specialized collections accessible to the reporting library.

If possible, the worksheets should not only include branch and departmental libraries, but also specialized collections accessible to the library's users, even when these are not administered by the central library. In all cases a scope note should indicate the inclusion or exclusion of these specialized collections.

i. Analysis of science collections.

The difficulties of analyzing science collections emerged as a particular concern during the ARL test of the RLG Conspectus. Part of the difficulty arises from the fact that the sciences rely heavily on journal literature and/or current materials. Moreover it is agreed that the LC classification scheme is weakest when used to describe science collections. To alleviate some of these difficulties, efforts are underway to develop more detailed supplemental guidelines to accompany the science worksheets. These guidelines are intended to characterize research collections in each field and to suggest appropriate ranges of serial holdings for different collection levels. Although monographic holdings are a vital component of science collections, checking serial holdings against standard lists

is an effective way to obtain benchmark data to guide the assessments. For example, the Supplemental guideline to the Chemistry division suggest that a research level collection include 60 to 70 percent of the titles pertinent to the subject area being described on the *List of 1000 Journals Most Frequently Cited by Chemical Abstracts.*

4. Review of Completed Worksheets

The review of the completed worksheets ensures that all relevant segments of the collections have been considered, including materials classed in non-LC classification systems, arranged by format without a classification, or housed in a separate branch library. Moreover, the review provides an opportunity to fine-tune the assessments through additional testing and to consult with other bibliographers. This step is particularly important when the conspectus worksheets involve several subdisciplines that may be the responsibility of a number of bibliographers. For example, the assessment of the psychology collection may involve social sciences and medical sciences bibliographers, and consultation among the bibliographers will ensure that all relevant aspects of the collection are considered in establishing the collection level codes.

In addition, the review allows comparisons of the library's collection levels with those reported by other libraries. Such comparisons not only provide a general framework within which to consider the library's collections, but they also offer information on the collection levels of specific libraries. Finally, the review verifies that values have been reported for each line, including zeros for segments on the worksheets that are out of scope for the library, and that notes have been constructed clearly and concisely.

5. Reporting Results

In most cases, Conspectus worksheets will be completed by a number of bibliographers, and the individual, completed worksheets need to be combined into a library-wide document. Depending on the organizational structure of the library, this process of integrating all responses will be carried out by the librarian responsible for collection coordination, a committee of collection development librarians, or a designated bibliographer. The completed worksheets will contain the following data elements for each line of the Conspectus:

- collection level code for the existing collection
- language code for the existing collection
- collection level code for the current collecting intensity
- anguage code for the current collecting intensity
- scope or comment notes as appropriate

6. Verification of Assessments

The general purpose of the verification studies is to assist bibliographers in testing the accuracy of their local assessment. The Conspectus-based verification studies have two important advantages: they provide a standard approach for testing library assessments in selected segments of the

Conspectus; and they offer comparative data from participating libraries. (8) However, limitations are the limited coverage of the verification studies, the cost of searching and analyzing the lists, and the relevance of the results. On balance, verification studies are useful to reinforce bibliographers' initial judgments. Recognizing that the results of collection assessments are more valid when the results of more than one method are combined, several types of verification studies have been developed. (A listing of available studies is given in the appendix).

a. Citation and reference studies and analyses

These studies test specific Conspectus subject lines or a combination of lines; they are prepared on the basis of a carefully drawn sample that represents the universe of available publications in the field. These lists are checked in each library and the percentage of holdings are reported. Although the results do not absolutely define the appropriate collection levels, taken together the reported results indicate ranges of holdings expected for each collection level. For example, the verification study for art of the Renaissance/ Baroque period suggests that a level 4 collection would contain between 65 and 75 percent of the titles in the checked list.

b. Shelflist measurements

Shelflist measurements can be taken for each line of the Conspectus in a given division. The reported measurements permit an analysis of comparative holdings and suggest ranges of holdings corresponding to specific collection intensity codes. So far this approach has been used in the Music Conspectus which includes each participating library's shelfist measurements. Further, the Latin American update includes shelflist measurements for major Latin American collections. Several regional groups in the Canadian Conspectus Project have relied on shelflist measurements as a tool for ensuring comparability of data.

The fact that these two methods measure only existing collection strengths has spurred efforts to develop studies to test the reporting of current collection levels. For example, the RLG Law Program Committee has collected data on budgets, titles added, number of subscriptions, and general acquisition policies as a means to provide benchmark data for current collecting intensities for foreign law. Another example is the verification study on neurology, which includes a count of current serial subscriptions.

While efforts to develop verification studies are underway, they are presently available in a limited number of subjects. In addition to the need for further studies, there is also a need to provide a means of sharing the results of the tests among libraries.

At the same time, it is important to note that the verification of collection levels is an evolutionary process. While it is desirable that libraries test the validity of their assessments, a phased process allows libraries to participate as time and staff allow. Libraries may decide to undertake studies only for selected subjects which are of special interest to them, postponing verification of other areas. The verification studies are optional tool offering libraries the opportunity to test the accuracy of their collection assessments through standardized approach. RLG analyzes the results of its libraries' completed verification studies. The analysis indicates percentage holdings, comparative standings, and unique holdings. Non-RLG libraries may use this service on a fee basis. The approximate cost for the analysis of each verification study is $200. Libraries interested in this service can contact OMS for details.

IX. LOCAL IMPLEMENTATION ISSUES

1. Communicating the Results

The task force needs to determine the best mechanism(s) for informing staff and users about the Conspectus. It may be that the library will wish to prepare a formal document which presents the results and considers various options for distribution. Obviously, library staff—especially collection development and public service staff—will want to have access to the document. Faculty and administrators are other potential audiences, and probably each academic department should have copies. Finally, the task force should consider audiences outside of its campus, such as area libraries, which might find it useful.

2. Using the Results

The task force can play an important role by recommending specific uses of the local results and the North American Collections Inventory. Included among possible uses of the library's Conspectus results are:

- as a tool to assist collection development staff in making selection decisions:
- as a collection policy document for users, especially faculty;
- as a support to making materials fund allocation decisions;
- as an indicator of preservation priorities;
- as a tool for working with other libraries to develop cooperative collection development programs.

Possible uses of the Conspectus On-line are outlined elsewhere in this Manual, but the task force should consider these uses and define steps the library needs to take to ensure that this tool is utilized fully and intelligently. They will want to consider issues of access to the data base, hard copy products from the data base, and methods of communicating the Inventory's potential value to staff and users.

Finally, consideration should be given to possible uses of the Conspectus results on a regional basis. Phase III of the North American Collections Inventory Project was designed to test various regional uses of the Conspectus and reports from that experience are available from the OMS. But, probably each research library considers itself as part of either a regional or statewide grouping of libraries and can consider utilizing the Conspectus approach to develop greater cooperation among those libraries.

3. Planning for Revisions

A final issue for task force consideration is the need to periodically review the library's Conspectus results and ensure that revisions are forwarded to OMS. The task force needs to consider how that will be done, who will do it, how often it will be done and how the revisions will be reviewed for validity. Since research libraries' collection policies do not change very quickly, or very radically, this need not be a large task, but if the North American Collections Inventory is to remain a valid tool for

scholars and libraries, the review needs to be carried out regularly at each participating library.

4. Contributing to the Evolution of the Conspectus

As noted earlier, specialized bibliographers played a critical role in the construction of the Conspectus and they will continue to shape the Conspectus in the future. Undoubtedly, the broadened use of the Conspectus will result in some changes. If a bibliographer believes that a particular Conspectus division has overlooked a topic, does not provide adequate detail for a subject, or contains errors in the LC breakdown, these suggestions should be referred to the library's coordinator for the Conspectus. Recommendations for adjustments in a specific Conspectus division must identify the present Conspectus On-line line(s), list the present LC class number(s) and subject descriptor(s), note the recommended change(s), and give reasons for the adjustment(s). All recommendations for changes in the Conspectus should be sent to OMS who will forward it to RLG for review.

One strength of the Conspectus methodology is that it permits improvements and enhancements. The Conspectus is an evolving tool and undoubtedly there will be additional Conspectus divisions, verification studies and other resources.

X. METHODS FOR COLLECTION ASSESSMENT

This final section of the Manual provides a brief introduction to collection assessments.

There are several available approaches to collection assessment. Carefully planned collection assessments will lead to a more accurate understanding of the strengths of the collection and will aid in the assignment of collection level codes. The section below reviews the most applicable methods for collection evaluations. In each case, principal advantages and disadvantages are listed. In addition, the appendix of the manual includes a bibliography of articles that review the literature and outline and discuss the application of specific methods.

Although there are a number of techniques for evaluating collections, each is limited in some way. In the final analysis, precise standards for measuring the quality of research collections do not exist. Any one method will probably give incomplete data, and the cumulative information obtained from a number of different approaches will increase the accuracy of assessing the strength and quality of research collections. Under optimal conditions a combination of collection assessments would be carried out to ensure the validity of the assessments. But, recognizing the dimension of such an approach, it is evident that the choice of method(s) will depend on the type of subject, on the staff expertise and time available, and on the amount of useful information likely to be yielded.

1. Qualitative Methods

a. Subjective evaluations by bibliographers through shelf-scanning or examination of the shelflist.

Probably the most frequently used method is that of bibliographers evaluating the collection through scanning the shelves, supplemented perhaps by a check of the circulation records. This direct examination of the collection reveals the size, scope, depth, and currency of materials in the collection. The major strengths of this approach are:

- It can be carried out relatively quickly and simply.
- It builds on the knowledge and expertise of bibliographers.
- It provides immediate, relevant results.

But it is evident from the RLG experience and the ARL tests that the subjective assessment is highly dependent upon the skills and experience of the bibliographer undertaking the evaluation. The process of subjective evaluation calls for careful judgment, informed knowledge of the existing collections and a breadth of scholarly vision. In this impressionistic approach the subject specialist becomes in a sense an external standard against which the collection is measured. It is this lack of objectivity that is the principal limitation of this approach. There is a danger that the collection levels are assigned on the basis of personal judgments and that evaluations may vary because of differences in evaluators as much as because of differences in collections. Since the results depend to a large extent upon the experience of the bibliographers and the validity of their perceptions, it is difficult to make meaningful and objective comparisons among libraries.

These limitations can be alleviated by considering a number of specific factors in the direct examination of the collection. While these factors will vary depending on the nature of the subject, they provide a framework for identifying specific types of materials and a context for the assessments. The list of factors below is suggestive, not definitive, offering a starting point for the bibliographer: (9)

- Chronological coverage: Are older and newer materials consistently represented? Should they be?
- Language coverage: How extensive is appropriate or significant foreign language coverage of the subject in the collection?
- Principal authors: Are the standard, or more important works in the collection?
- Principal works: Are the classic, standard, essential, and important works, in the collection?
- Primary sources: How extensively are critically edited original texts and documents included?
- Criticism/commentary/interpretation: How complete is secondary monographic or critical treatment?
- Complete sets: Are sets and series well represented in the collection? Are they complete?
- Periodical coverage: How extensive is periodical coverage of the subject? Are the core titles included?
- Number of volumes: What is the approximate size of collection? How many volumes are acquired annually?
- Funding: How much is budgeted?

Although not all these factors will be applicable to all Conspectus divisions, they suggest a general point of departure for the assessments. It is also recognized that some of the information will not be available or will be available only at great cost. Despite these cautions, a systematic scanning of the shelves tells much about the quality of the collection and provides a sound basis for assigning collection level codes.

b. Faculty evaluations

It has been suggested that one of the most effective collection evaluation techniques is one in which the bibliographer works closely with the teaching faculty or resident scholars. This consultative process can result in significant benefits, including:

- It provides evaluations based on in-depth subject knowledge.
- Bibliographers gain better understanding of faculty research interests.

- It expands faculty's knowledge of the contents of the collections.

- Faculty awareness of the library's efforts may help to gain faculty support for resource sharing programs.

Although involvement of faculty in collection evaluation fosters greater understanding between librarians and faculty, libraries using this approach noted three potential problems:

- Faculty interested in assessing the collection may be difficult to locate.

- Faculty may lack adequate knowledge of the collection and their interests may be focused more narrowly than the collection scope.

- Faculty judgments will be primarily impressionistic, and their assessments may be overly optimistic or distorted by their specialized interests.

Careful planning and selection of faculty can go far to overcome these problems. During the test of the Conspectus ARL libraries used two approaches successfully. In one case, the library used faculty library committee members, and the group together with the bibliographer reviewed the shelflist for the appropriate sections of the conspectus and established collection level codes. In another case, faculty members worked independently and assigned their evaluations to the worksheets, and the bibliographer used the data to test and refine his own collection assessments. In both cases, the bibliographers felt that they benefited from this consultative approach. Not only could they test their own evaluations, but they also gained a better understanding of problem areas within the collections.

2. Quantitative Methods

a. Shelflist Measurements

In this approach measurements are taken of the collections according to a predetermined breakdown of the classification schedule. From these measurements the number of titles in each classification is calculated on the basis of a fixed formula. (See the appendix on statistical aids for determining the formula).

There are three advantages in this method:

i. Statistics provide a measure of objectivity. The counts provide quantitative data and can contribute to a more articulated decision-making process in collection evaluation.

ii. Numerical counts can be obtained relatively easily. The procedure for obtaining shelflist counts has been in use for many years and is simple and inexpensive to carry out.

iii. Shelflist counts can be compared to the data from other research libraries. Data from similar libraries can be used to gain a better understanding of the library's relative strengths and weaknesses in a specific subject.

While libraries have used shelflist counts extensively in collection assessments, this method is not without pitfalls. Among the potential difficulties are:

i. A shelflist count reflects cataloged holdings only and excludes uncataloged and unclassified materials. Thus government and international organization publications, manuscripts, pamphlets, maps, microforms, sound recordings, and special collections may not be classified and would not be reflected in shelflist measurements. In addition, shelflist measurements frequently exclude materials classified in other than standard classification systems.

ii. Shelflist counts cannot measure collection quality. For example, a small carefully chosen collection may be superior to a larger collection containing outdated and uncritically acquired materials.

iii. The counts represent an approximation of holdings only. Because of the lack of standards of what is being counted, it is difficult to compare counts, and local cataloging policies and shelflisting practices can produce incompatibilities in the measurements.

Careful interpretation of the shelflist counts can resolve some of these inherent difficulties. For most libraries, the primary usefulness of the shelflist count is the ability to compare local data with similar data from other research libraries. A number of regional coordinated collection development efforts have experimented with the use of shelflist counts for collection evaluation. On the national level, the National Shelflist Count Project is a pioneering effort, which provides an opportunity for relating shelflist counts in approximately 500 subjects to those reported by the participating research libraries. Starting in 1973, the National Shelflist Count has been undertaken every two years, with some exceptions. ALA's Resources and Technical Services Division published the 1985 Count in 1986, which includes the shelflist measurements from 48 research libraries. While there has also been some discussion of expanding this approach to match the LC ranges in the Conspectus, this is still under consideration.

But the National Shelflist Count Project has also demonstrated that bibliographers must ultimately rely on their judgment in interpreting the data. While the shelflist counts provide useful data, they do not indicate the quality of the collection. It is evident that shelflist counts can be one input in establishing the relative adequacy of the collections, but they should never be considered as the sole criterion for establishing collection levels.

b. Compiling Statistics

Numerous studies document the fact that decision-making in collection evaluation benefits from the availability of library statistics. A number of different approaches are found in the burgeoning literature on collection evaluation. Among the approaches described are compilation of materials expenditures, counts of total volumes and periodical subscriptions, and analysis of interlibrary loan requests. These statistics offer much information on the collection, but, as with the shelflist counts, they should be placed within a larger context. It is important that the quantitative data are interpreted carefully by the bibliographer and considered with other more qualitative aspects.

3. Sampling Methods

Sampling techniques can be used very effectively to determine the characteristics of a segment of the collection. For example, a carefully drawn shelflist sample can delineate the scope of the collection and can provide information on publication dates; countries of origin, languages of publications; formats of materials; and depth of coverage. The major advantages of this technique include:

- It provides quantitative data on collection scope.
- It allows comparisons with other libraries.
- It will increase the objectivity of the assessments.

Problems in applying sampling techniques fall into two categories:

- It is time-consuming to design the sample, to collect the information and to analyze the data.
- The technique typically represents cataloged holdings only.

A number of articles in the library literature describe the benefits derived from sampling as a means to gather information on the characteristics of a segment of the collections. But these studies also underscore the fact that this technique requires a significant staff effort. On balance, it is suggested that bibliographers apply this technique to segments of the collection which are of special interest to them. The appendix describes specific techniques to assist bibliographies in carrying out a sample survey.

4. List-Checking Methods

a. Published Lists

The checking of published lists has long been used to assess the quality of research collections. List-checking essentially evaluates the collection against a recognized universe of published literature. Bibliographers choosing this approach have a wide range of lists available, including standard bibliographies, printed library catalogues, authorized lists of professional associations, and subject lists. The list-checking approach has significant advantages:

- Many comprehensive and specialized lists are available. Many are updated regularly and most are compiled by competent subject specialties.
- The actual checking of lists is easy to execute and effective in producing clear-cut results on holdings.

But there are also a number of disadvantages:

- Published lists may have been used previously as buying guides for the collection being evaluated.

- Published lists soon become outdated unless they are systematically revised.

- Published lists may not represent a subject well and may include titles outside the scope of research collections.

- Published lists do not automatically rate the depth of a library collection according to a specified number or percentage of titles to be found in the library.

- The checking of lengthy lists can become very time-consuming.

Notwithstanding these limitations, list-checking can be a very useful tool. But great care must be taken in selecting the lists because the accuracy of the assessment depends almost entirely on the authoritativeness and appropriateness of the chosen list. In list-checking bibliographers have two choices. The first option is a complete check of the titles in a given list. This approach is appropriate when the number of titles is limited. In general, lists of fewer than 400 titles should be checked completely. A second option is the checking of a random sample of titles if the list is very large. The appendix describes techniques for selecting a statistically valid sample. The results of list checking will provide a percentage of titles held in the collection. Obviously the results do not automatically determine the appropriate collection levels according to a specified standard percentage of titles found, but the careful analysis of the findings will tell much about the holdings of the library relative to the universe of published materials and can be used effectively in assigning collection level codes.

b. Citation - Reference Studies

In an effort to overcome some of the inherent problems of using published lists, librarians have recently focused on citation checking techniques as a more effective method for evaluating research collections. There are a number of different ways of compiling citation-reference studies. One approach is citation checking which consists of drawing a sample of citations from items cited in footnotes or bibliographies of scholarly books or articles. (10) Another approach is drawing a sample from a list of recommended titles covering the field which is being evaluated. The literature on using these techniques for evaluating collections notes many advantages, including:

- Lists can be compiled according to specific needs and for all disciplines.

- They can be useful if appropriate published lists are not available.

- They are frequently more reliable than published lists.

Although citation-reference studies provide more accurate results, there are a brace of caveats. As in the case of published lists, "the selection of source works is vital to the success of the method, and should closely reflect the aim and objectives of the study."(11) A second concern relates to the fact that it is time-consuming to compile the lists. For example, the staff of the Brigham Young University Library determined that it took 15 hours of a combination of professional and clerical time to prepare a tailor-made list of 300 titles.

But as a number of studies have documented citation-reference studies can be very effective tools for evaluating specific segments of the collection. When used for a well-defined subfield, such lists provide a reliable assessment of the collection. As noted earlier, efforts to validate the ratings of collections in the Conspectus focus primarily on checking local holdings against lists of randomly selected citations and they underscore the usefulness of this collection evaluation technique.

XI. FOOTNOTES

1. An excellent overview of the development of the RLG Conspectus is found in: Gwinn, Nancy E. and Mosher, Paul H. "Coordinating Collection Development: The RLG Conspectus", College & Research Libraries 44 (March 1983): 128-140.

2. Farrell, David. "The North American Collections Inventory Project (NCIP): 1984 Phase II Results in Indiana." *Resource Sharing and Information Networks* 2 (Spring/Summer 1985): 37-48.

3. Dowd, Sheila, T. "The Formulation of a Collection Development Policy Statement", in Collection Development in Libraries: A Treatise, edited by Robert D. Stueart and George B. Miller, Jr. (JAI Press, Inc., Greenwich, CT, 1980): 75.

4. Hazen, Dan C. "Modeling Collection Development Behavior: A Preliminary Statement", Collection Management 4 (Spring/Summer 1983): 3.

5. Dowd, Sheila T. written communication, December 7, 1983.

6. *Titles Classified by the Library of Congress Classification: National Shelflist Count.* 1985. Chicago, Resources and Technical Services Division, American Library Association, 1986.

7. These sections have been adapted from the guidelines developed by the Indiana University Collection Development Policy Task Force. Sheila Dowd also contributed to the clarification of the language codes.

8. An excellent description of a verification study is provided by: Larsen, Jeffrey. "The RLG French Literature Collection Assessment Project", Collection Management 6 (Spring/Summer 1984): 97-114.

9. These factors have been adopted from the guidelines developed by the Alaska Statewide Collection Development Steering Committee.

10. An excellent description of this approach is found in: Nisonger, Thomas E. "A Test of Two Citation Checking Techniques for Evaluating Political Science Collections in University Libraries", Library Resources & Technical Services 27 (April/June 1983): 163-176.

11. Mosher, Paul H. "Quality and Library Collections: New Directions in Research and Practice in Collection Evaluation," in Advances in Librarianship. 13 (1984): 211-238.

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SAMPLE

PHYSICAL SCIENCES **RLG CONSPECTUS WORKSHEET** **INSTITUTION:**

LC CLASS EQUIVALENTS	SUBJECT GROUP	COLLECTION LEVELS AND LANGUAGE COVERAGE		COMMENTS
		ECS	CCI	
QD	**CHEMISTRY**			
QD96	1. Spectroscopy (Applied)			
QD161-169	2. Inorganic Chemistry: Alkaline and Alkaline Earth, and Metals, including Gases, Chemistry of the Air, and Halogen			
QD172.T6	3. Inorganic Chemistry: Transitional Metals			
QD189-193	4. Inorganic Chemistry: Salts			
QD416-431	5. Natural Products, including Terpenes, Gums and Resins, Akaloids, Protein, Peptides, and Amino Acids			
QD504	6. Conditions and Laws of Chemical Reactions: Thermodynamics			
QD505	7. Conditions and Laws of Chemical Reactions: Catalysis			

NCIP ORDER FORM

FED. ID #52-0784198-N

THIS ORDER FORM MAY BE USED AS A PROFORMA INVOICE

(202) 232-8656

north american collections inventory project

To order, fill out below and send with **PREPAYMENT*** to: ARL Office of Management Studies, 1527 New Hampshire Ave. NW, Washington, DC 20036. Claims must be made within 90 days. (*ARL library members may be billed)

PREPAYMENT IS REQUIRED

Purchase Order #:_____ Shipping Address:_____

Date: ___/___/___

OMS Client No.:_____
(see mailing label)

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TOTAL NUMBER of Publications ordered: _____

TOTAL COST FOR PUBLICATIONS $_____

OUTSIDE U.S., POSTAGE CHARGE $5.00 *per item* $_____

TOTAL AMOUNT ENCLOSED $_____

For Internal Use

Date ___/___/___
Postage

INDICATE QUANTITY AND COST FOR EACH ITEM ORDERED

NO.	TITLE	COST	QUANT.	TOTAL COST
NC01	1988 Manual	$30	___	_____
NC02	Searching 50/$10 Reference Cards		___	_____
NC03	All Wkshts.	$80	___	_____
NC04	LC-Dewey Tbl.	$20	___	_____
NC05	Manual-French 1985 ed.	$20	___	_____
NC06	Stdg Ord/1 yr	$75	___	_____
NC07	NCIP News 1yr	$75	___	_____
NC08	Pres. Notes	$3		

Individual Worksheets

CN01	Agriculture	$4	___	_____
CN02	Art & Arch.	$7	___	_____
CN03	Ntrl. Hist. & Bio.	$7	___	_____
CN04	Cartographic	$7	___	_____
CN05	East Asian	$3	___	_____
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CN07	Education	$3	___	_____
CN08	Govt. Docs.	$7	___	_____
CN09	Hist. & Aux Sci. of Hist	$12	___	_____
CN10	Latin Amer.	$7	___	_____
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CN12	Library Sci.	$3	___	_____
CN13	Linguistics, Lang. & Lit.	$7	___	_____
CN14	Medicine & Health Sci.	$4	___	_____
CN15	Music	$3	___	_____
CN16	Phil. & Rel.	$3	___	_____
CN17	Physcl. Geo & Earth Sci.	$3	___	_____
CN18	Phys. Sci.	$3	___	_____
CN19	Math	$3	___	_____
CN20	Pol. Sci.	$3	___	_____
CN21	Psychology	$3	___	_____
CN22	So. Asian	$7	___	_____
CN23	Technology	$7	___	_____

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NO.	TITLE	COST	QUANT.	TOTAL COST

Verification Studies

VS01	Ag Econ	$10	____	_____
VS02	Art & Arch	$20	____	_____
VS03	Chemistry	$20	____	_____
VS04	English Lit	$20	____	_____
VS05	French Lit	$20	____	_____
VS06	Genetics	$20	____	_____
VS07	Mathematics	$10	____	_____
VS08	Russian Hist	$20	____	_____
VS09	Religion	$20	____	_____
VS10	Swiss Hist.	$20	____	_____
VS11	Zola	$20	____	_____
VS12	Chamber Mus.	$20	____	_____
VS13	Neurology	$20	____	_____

Complete List of NCIP Materials

NC01 Reed-Scott, Jutta. Manual for the North American Inventory of Research Library Collections. September 1988.

NC02 Conspectus Searching Basics. 1988. 6pp. Reference card to serve as a quick guide for searching the Conspectus On-line data base. An order consists of 2 packages of 25 cards.

NC03 All 23 North American Collection Inventory Project RLG Conspectus Worksheets. Available Supplementary Guidelines are attached to worksheets.

NC04 LC-Dewey Translation Tables

NC05 Reed-Scott, Jutta. Guide De L'Inventaire Des Collections Des Bibliotheques De Recherche En Amerique Du Nord. January 1985. 121pp.

NC06 NCIP Materials Standing Order. Subscriptions to this service will include receipt of revised worksheets, new verification studies and supplementary guidelines as they are published. Subscriptions will also include sample reports of libraries' approaches to completing sections of the conspectus, and one subscription to NCIP News.

NC07 NCIP News subscription. Four to six issues per year.

NC08 RLG Conspectus Scope Notes. June 1988. 14 pp.

INDIVIDUAL WORKSHEETS

CN01 Agriculture RLG Conspectus Worksheets and Supplemental Guidelines.

CN02 Art and Architecture RLG Conspectus Worksheets and Supplemental Guidelines.

CN03 Natural History and Biology RLG Conspectus Worksheets and Supplemental Guidelines.

CN04 Cartographic Materials RLG Conspectus Worksheets and Supplemental Guideline.

CN05 East Asia RLG Conspectus Worksheets.

CN06 Economics And Sociology RLG Conspectus Worksheets.

CN07 Education RLG Conspectus Worksheets and Supplemental Guidelines.

CN08 Government Documents RLG Conspectus Worksheets and Supplemental Guidelines

CN10 Latin American Update RLG Conspectus Worksheet.

CN11 Law RLG Conspectus Worksheet.

CN12 Library and Information Sciences RLG Conspectus Worksheets and Supplemental Guidelines.

CN13 Linguistics, Languages, and Literatures RLG Conspectus Worksheets and Supplemental Guidelines.

CN14 Medical and Health Sciences RLG Conspectus Worksheets and Supplemental Guidelines.

CN15 Music RLG Conspectus Worksheets .

CN16 Philosophy and Religion RLG Conspectus Worksheets and Supplemental Guidelins.

CN17 Physical Geography and Earth Sciences RLG Conspectus Worksheets.

CN18 Physical Sciences RLG Conspectus Worksheets and Supplemental Guidelines

CN19 Physical Sciences (Mathematics) RLG Conspectus Worksheets and Supplemental Guidelines.

CN20 Political Science RLG Conspectus Worksheets.

CN21 Psychology RLG Conspectus Worksheets.

CN22 South Asian RLG Conspectus Worksheets.

CN23 Technology RLG Conspectus Worksheets

VERIFICATION STUDIES

VS01 Methodology for Developing the Title Overlap Study for Agricultural Economics.

VS02 Art Verification Project, Parts I and II.

VS03 Verification Study in Chemistry

VS04 English Literature Verification Study

VS05 French Literature Verification Study

VS06 Verification Study in Genetics

VS07 Mathematics Verification Study

VS08 Verification Study in Russian History and Literature

VS09 Religion Verification Study

VS10 Conspectus Verification Study: Swiss History

VS11 Verification Study in Zola

VS12 Chamber Ensemble Music

VS13 Verification Study in Neurology

AVAILABLE WORKSHEETS AND SUPPLEMENTAL GUIDELINES FOR THE CONSPECTUS

Status September 1988

LC Class	Subject	Available Worksheets	Available Supplemental Guidelines
A	General Works	No	No
B-BD	Philosophy & Religion	Yes	Yes
BF	Psychology	Yes	No
C	Auxiliary Sciences of History	Yes	No
D, E, F	History	Yes	No
G-GF	Physical Geo. & Earth Sci.	Yes	No
	Cartographic Materials	Yes	Yes
GN	Anthropology	No	No
H-HX	Economics & Sociology	Yes	No
	Government Documents	Yes	Yes

LC Class	Subject	Available Worksheets	Available Supplemental Guidelines
JA-JX	Political Science	Yes	No
K	Law	Yes	No
L	Education	Yes	Yes
M	Music	Yes	No
N	Art & Architecture	Yes	Yes
P	Linguistics, Languages & Literatures	Yes	Available for: English & American and French
QA-QD	Physical Sciences Chemistry	Yes	Available for: Mathematics & Chemistry
QE	Geology included in Earth Sciences	Yes	No
QH-QR	Biology and Natural Sciences	Yes	Yes
R	Medicine & Health Sciences	Yes	Yes
S	Agriculture	Yes	Yes
T	Technology	Yes	No
U, V	Military Sciences	No	No
Z	Library Science	Yes	Yes

SAMPLE CONSPECTUS ON-LINE RECORD

Division: LINGUISTICS, LANGUAGES, AND LITERATURES
Category: ENGLISH AND AMERICAN LANGUAGES AND LITERATURES

LLL197 Canadian Literature PR9180-9199
PCR:None

COSG	2/2	
CSUG	2/3E	
CTYG	4/4W	
CUBG	3/3	Selected major writers collected at research level. Special collection of first editions of 20th century English authors.
CUDG	2/3F	
DCLC	4/5W	
IAUG	3/3	
ILNG	2/3F	
MAAR	4/4E	
MDJG	1/1	
MIUG	2/2F	
NHDG	3/3	
NJPG	3/3	
NJRG	2/2	
NYCG	3/3E	
NYCX	3/3E	
NYPG	4/4F	
NYUG	2/2E	
PASG	3/3	
PATG	2/3E	
PAUG	1/1	
RIBG	3/3	Classed with English authors. Strength in poetry and plays, many in non-circulating Harris collection.
UTBG	3/3E	

SAMPLE of COMPLETED

CONSPECTUS WORKSHEET

Subject Division

PHYSICAL GEOGRAPHY AND EARTH SCIENCES

values reported by bibliographers

INSTITUTION

LC CLASS	SUBJECT GROUP		COLLECTION LEVELS AND LANGUAGE COVERAGE		COMMENTS
			ECS	CCI	
subject category	GEOMORPHOLOGY	Subject descriptor			
GB400-406	GE07	General	3E	3E	
	GE09	Methodology	3E	3E	
	GE010	History	2E	2E	
	GE011	Regional geomorphology - General	3E	3E	
GB425-428	GE012	Regional geomorphology - North America	3E	4F	Special strength: Canadian geomorphology
GB429-430	GE013	Regional geomorphology - Central America	2F	2F	
GB431-434	GE014	Regional geomorphology - South America	1E	1E	
GB435-436	GE015	Regional geomorphology - Europe	3F	3F	
GB437-438	GE016	Regional geomorphology - Asia	3F	3F	
GB439-440	GE017	Regional geomorphology - Africa	3F	3F	
GB441-442	GE018	Regional geomorphology - Australasia	3E	3E	
GB444-445	GE019	Regional geomorphology - Polar regions	4F	3E	
GB446	GE020	Regional geomorphology - Tropics	2E	2E	
GB447-448	GE021	Climatic geomorphology	3E	3E	

comment note

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LOCAL ORGANIZING FOR NCIP

- Decide to Participate
- Designate Coordinator of Coordinating Committee
- Select Conspectus Sections
- Identify Needed Resources
- Identify Staff to be Involved
- Assign Responsibilities
- Establish Timetables
- Provide Training
- Monitor Progress
- Maintain Liaison with OMS
- Review Results
- Provide Feedback
- Perform Verification Studies (Optional)
- Enter Assessment Data into Conspectus On-line

SEQUENCE OF TASKS FOR COMPLETING CONSPECTUS WORKSHEETS

PLANNING

- Review subject division and supplemental guidelines
- Assign subject categories to appropriate bibliographer(s)
- Establish timetable for completion

PREPARATION

- Read manual
- Review existing documentation

CONDUCTING THE ASSESSMENT

- Determine appropriate collection evaluation technique(s)
- Carry out collection assessment
- Collect needed data
- Monitor progress and results

ANALYSIS OF RESULTS OF ASSESSMENTS

- Determine strengths and weaknesses of the collection
- Determine language coverage
- Identify unique strengths
- Identify chronological and/or geographical emphases or exclusions

ESTABLISHMENT OF COLLECTING LEVELS AND LANGUAGE CODES

- Assign codes to each line of the Conspectus
- Add scope and comment notes

REVIEW OF WORKSHEETS

- Identify additional information needed
- Consult with bibliographers in related or overlapping areas
- Compare the assessments with those reported by other libraries
- Make adjustments and corrections

PREPARATION OF LIBRARY-WIDE CONSPECTUS DIVISION WORKSHEETS

- Integrate assessments if necessary
- Review with all appropriate bibliographers
- Consult with faculty (if appropriate)

SUBMISSION OF RESULTS

- Submit completed worksheets to OMS for data entry into the RLG Conspectus On-line

SUPPLEMENTAL GUIDELINES FOR THE MEDICAL AND HEALTH SCIENCES CONSPECTUS

The Medical and Health Sciences Conspectus has been developed by broad subject/speciality with correlated classification numbers from the Library of Congress and National Library of Medicine classification schemes. This approach was necessary because RLG medical libraries use both classification schemes. The classification numbers which are shown with each subject are guidelines to the subject and should not be interpreted as all-inclusive.

The RLG Collection Development Manual on p. 2-1 (q.v.) defines the six (0-5) levels of collecting which should be used in determining the appropriate ECS and CCI for individual subjects when completing conspectus worksheets. Those definitions have been modified as follows for completion of the Medical and Health Sciences Conspectus worksheets.

"In most health science libraries materials are acquired to support five basic functions: 1) clinical practice and health care services; 2) research by faculty, staff, and students; 3) education and training of health professionals; 4) administration of health care services and educational programs; and 5) preservation of institutional publications of related materials (archival functions)."[1] The primary literature in support of those functions is the periodical literature, which accounts for more than 75% of most medical library collections. Monographs, though important, are regarded as secondary literature. Audiovisual materials, rare books and other special collections are also important segments of the collections in which they are found.

ECS and CCI values in the worksheets should reflect the library's existing collection and collecting intensity for periodicals and monographs. Variations and other materials or collections should be reflected in the notes. The values should reflect the institutional collection; if significant portions of the collection in some subjects are housed in campus libraries other than the primary health science library, these collections should be consulted as well.

In determining the appropriate ECS and CCI, it is important to recognize that for varying periods since the mid-1960's many health science libraries "sacrificed" monograph collecting in order to preserve the integrity of their periodical collections. The result of this approach to collection development is that many medical libraries have periodical and monograph collections in which the depth of both existing collections and current collecting activity varies significantly according to format. If this situation occurred in your library, it should be indicated in the notes field. If, for example, your library's Pediatric collection warrants a 4 level ECS for periodicals, but only a 2 level ECS for monographs, the ECS entered on the worksheet should be 4; the

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[1] Eakin, D. "Health Science Library Materials: Collection Development", in Handbook of Medical Library Practice, edited by Louise Darling. 4ed. Chicago: Medical Library Association, 1983. v.2:28.

disparity in the monograph collection should be indicated in the notes field as follows: "ECS 2 for monographs." If there is no disparity between the two formats, only one value needs to be entered. Similar phrasing should be used to indicate collection levels for audiovisual materials, rare books, and other special collections which may be present.

In assigning values for ECS and CCI, it is important to bear these points in mind:

1. These values describe collections or collecting policies absolutely, not relatively. They assume therefore a national perspective and a broad cognizance of all facets of collecting.

2. When the value describes existing collection strength, it should relate to national shelflist measurement, reflecting what is actually on the shelves.

3. When the value describes current collecting intensity, it represents actual collecting practices, and not policy, if that policy is being imperfectly observed.

The following definitions should be applied as uniformly as possible to achieve consistency. Each succeeding level of collecting is presumed to be inclusive of those which precede it.

0. Out of Scope: The library does not collect in this area.

1. Minimal Level: A subject area in which few selections are made beyond very basic works.

2. Basic Information Level: A highly selective collection which serves to introduce and define a subject, and to indicate the varieties of materials available elsewhere. It includes a representative selection of dictionaries, encyclopedias, historical surveys, bibliographies, and handbooks. It contains selected editions of textbooks and monographs and the periodicals cited in the Brandon-Hill list list.[2] A basic information collection is not sufficiently intensive to support any advanced undergraduate or graduate courses or independent study in the subject area involved.

3. Instructional Support Level A selective collection which is adequate to support undergraduate and MOST graduate instruction, or sustained independent study within a curriculum, and health care in a hospital or clinical setting; that is, a collection which is adequate to maintain knowledge of a subject required for limited or generalized purposes, of less than research intensity. It includes the major reference tools for the pertinent subject, significant indexing and abstracting services, a broad selection of major

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[2] Brandon, AN, Hill, D. Selected List of Books and Journals for the Small Medical Library. Bull Med Libr Assoc 1983 Apr; 71:147-175. [revised biennially]

textbooks, monographs, and government documents, and a wide range of basic periodicals, including at least 25 percent of the English language titles pertinent to the subject in List of Journals Indexed in Index Medicus.[3]

4. Research Level A collection which contains the major published source materials required for dissertations and independent research, including specialized reference tools, conference proceedings, professional society publications, technical reports, government documents, multiple editions of most textbooks and monographs, including a significant number of titles pertinent to the subject in a recognized "standard" bibliography, an extensive collection of periodicals, including at least 65 percent of the titles pertinent to the subject in List of Journals Indexed in Index Medicus. While English materials may predominate, the collection usually contains important materials in French, German, Spanish, Russian, and other languages. Older or superseded materials are retained for historical research.

5. Comprehensive Level A collection in which the library endeavors, insofar as possible, to include all significant works of recorded knowledge (publications, manuscripts, other forms) in all applicable languages for a necessarily defined and limited field. This level of collecting intensity is one that maintains a "special collection"; the aim, if not the achievement, is exhaustiveness.

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[3] National Library of Medicine. List of Journals Indexed in Index Medicus. Washington, D.C.: For sale by the Superintendent of Documents, U.S. Government Printing Office, 1984 [annual]

Available Verification Studies

Agricultural Economics.
Renaissance and Baroque Art, Parts I and II.
Chemistry
English Literature
French Literature
Genetics
Mathematics Journals
Russian History and Russian Literature
Swiss History
Zola
Chamber Ensemble Music
Neurology

FRENCH LITERATURE VERIFICATION PROJECT RESULTS (10/26/83)

Sample table of results for a verification study

SECTION OF BIBLIOGRAPHY (Monographs/serials)	YALE (CTYG) Monographs #	%	Serials #	%	Total #	%	BRIGHAM YOUNG (UTBG) Monographs #	%	Serials #	%	Total #	%
1:1 Phonology 37/46	28	75.7	35	76.1	63	75.9	21	56.8	16	34.8	37	44.6
1:2 Aucassin et Nicolette 27/15	22	81.5	11	73.3	33	78.6	10	37.0	10	66.7	20	47.6
2:1 Marot 24/18	20	83.3	17	94.4	37	88.1	15	62.5	12	66.7	27	64.3
2:2 Du Bellay 49/34	39	79.6	22	64.7	61	73.5	29	59.2	8	23.5	37	44.6
3:1 Mairet 34/8	23	67.6	6	75.0	29	69.0	10	29.4	3	37.5	13	31.0
3:2 Racine 58/67	30	51.7	50	74.6	80	64.0	16	27.6	12	17.9	28	22.4
4:1 Fontenelle 28/14	14	50.0	10	71.4	24	57.1	4	14.3	3	21.4	7	16.7
4:2 Diderot 64/82	45	70.3	46	56.1	91	62.3	20	31.3	16	19.5	36	24.7
5:1 Zola 20/125	12	60.0	37	29.6	49	34.0	5	25.0	17	13.6	22	15.2
5:2 Verne 52/73	23	44.2	28	38.4	51	40.8	16	30.8	15	20.5	31	24.8
6:1 Riviere 25/17	21	84.0	13	76.5	34	81.0	10	40.0	6	35.3	16	38.1
6:2 Derrida 16/67	9	56.3	55	82.1	64	77.1	7	43.8	30	44.8	37	44.6
TOTAL 434/566	286	65.9	330	58.3	616	61.6	163	37.6	148	26.1	311	31.1

Yale's collecting levels for IDs LLL79-LLL85 (French literature --General through 20th century): all 4/4W.

BYU's collecting levels for IDs LLL79-LLL85 (French literature--General through 20th century: all 3/3W with the exception of 19th century - 3/4W.

Statistical Aids*

Sampling

Sampling can be used effectively in collection evaluation for two purposes: preparation of tailor-made lists; and determination of the characteristics of a segment of the collection. In both cases the magnitude of the data will frequently be so great that checking every title or shelflist card becomes impractical. When this occurs, a carefully designed sample will provide valid information at considerably less effort and cost.

The universe or population from which the sample is drawn is the total number of citations or shelflist cards. The results from a sample of this population can then be "inferred" or generalized to the entire population. For example, a library has 44,000 titles classified in PC2001-3761 and wants to know how many of these titles were published in French. Instead of counting the entire collection, a sample of about 300 titles would be drawn. The information from this sample would then be extrapolated to the whole PC2001-3761 collection.

Sampling is a multi-step process. The first step is the determination of the sample size.

I. Sample Size Determination

Although formulas exist for determining sample size, it is usually easier to use sample size tables. (See pp. 7-10.) Four elements of information are needed to determine the sample size.

1. Size of Population. This refers to the total number of elements within the population.

2. Confidence Level. Confidence levels of 95% and 99% are common to most sampling. A confidence level of 95% indicates a desire to be correct 95 times out of 100. Stated another way, a 95% confidence level indicates that a sample that can result in more than 5 errors per 100

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* These materials have been adopted from Hall, Blaine H. "Statistical Aids", in his Collection Assessment Manual (Harold B. Lee Library, Brigham Young University, Provo, Utah, 1981): C1-C12.

occurrences is intolerable.

3. Precision of Reliability. Reliability denotes whether or not repeated sampling will produce the same results. A reliability of 5% indicates a willingness to tolerate a 5% margin of unreliability in either direction of the mean or average value.

4. Expected Rate of Occurrence. If you have a good prior idea of the outcome, you may cut down the necessary sample size by estimating the outcome. For example, if, in the prior example, you expect 30% French language books in the population, you may use a sample size table determined for the rate not to exceed 30% or to be less than 70% and reduce the necessary sample size. If you have no idea as to how many French books are in the population, you must use a table based upon a 50% rate of occurrence. (A 50% table requires the largest sample size). This table will require a larger sample size since there is no educated guess.

The use of the tables is very simple. First, determine an acceptable confidence level and apply your estimate of expected occurrences. Then, turn to the appropriate table, find the size of your population in the left hand column, determine the desired degree of reliability, and find the number at the intersection of the population line and reliability column. This number represents the appropriate sample size for the population given the constraints indicated.

Example: Using the prior example of French language books, assume an expected rate of occurrence of not more than 15% of the population. Assume also a desire for 95% confidence and 4% reliability. Look at the chart which matches an expected rate of occurrence of not more than 15% and a confidence level of 95%. Find the intersection for the column for 4% and the line for a population size of 50,000 (since 44,000 is included in 50,000 but exceeds the next lower population of 20,000). The sample size at this intersection is 304 and becomes the number of samples necessary from a population of 44,000 given the above constraint.

II. Sampling Techniques

The second step is the determination of the sampling technique. The choice depends primarily on the purpose of the study. Counting to a sample is generally used in drawing a sample from a large number of citations. Measuring to a sample is the appropriate technique for determining the characteristics of the collection.

1. Counting to a Sample. This technique is also referred to as "systematic sampling." It is conducted as follows: Suppose it is necessary to select a sample of 300 books from a population of 15,000 books. Dividing 15,000 by 300, we find we should select about every 50th item for inclusion.

In selecting a sample by this technique, we must first choose a number at random from a random number table. (The technique for choosing this number will be explained below). Assuming the number turned out to be 27, the first book in the sample would be the 27th one, such as 77, 127, 177, 227, ... , 14,977. This would complete the sample.

Example:

a. Take a sample from the List of 1000 Journals Most Frequently Cited by Chemical Abstracts.

b. Determine the number of samples necessary by applying the procedure in I. Sample Size Determination. (Assume this yields 244 samples.)

c. Divide 1000 by 244=4

d. Follow the procedure for choosing a random number between 1 and 4. (Assume the number is 4)The 4th title on the list would be the beginning of the sample list, followed by the 6th, 10th, 14th etc. titles.

2. Measuring to a Sample. Many times, the number of elements between samples in a population is so great that it is difficult to count to the sample, and measuring must be undertaken. When this is necessary the population elements must be uniform in size. This is the situation which usually exists in files such as a library's shelflist.

In obtaining samples from shelflist (or similar files), proceed through the following steps, using the Shelflist Distribution Form, p.6.

Step 1: To determine the number of cards in the shelflist population, take seven one-inch samples. This is done by counting the cards in each of seven one-inch samples. Each sample should be taken in a different position and, where possible, in a different drawer. The total number of cards counted in each sample is tabulated and totaled. The sum of the seven cards counted in each sample is tabulated and totaled.

The sum of the seven samples is then divided by seven. The quotient is the number of cards per inch. (Note: If there are more than four cards difference in any one or more of the seven samples, the sampling must be repeated as the samples were apparently not measured under uniform pressure.)

Step 2: (a) Measure the entire section of shelflist within which the population under examination exists. This is done by pressing the cards in each drawer fairly tightly and measuring them with a retractable metal ruler. The measurement of each drawer is tabulated and totaled to get the overall length.

(b) Then, multiply the overall length by the number of cards per inch to obtain the number of cards in the shelflist.

Step 3: Determine the number of samples necessary for the study by following the procedures under "Sample Size Determination."

(a) Divide the total number of cards in the entire population by the total number of samples necessary. This result is the number of cards between samples.

(b) Divide this result (number of cards between samples) by the average number of cards per inch which was determined in Step 2. This final result will be the number of inches between samples in hundredths.

Step 4: Convert inches from hundredths to sixteenths by using the interval conversion table on the Shelflist Distribution Form.

Step 5: Determine the entry point into the population by selecting a random number from a random number list wihin the number of cards between samples. Begin the sampling process by counting to this number and then measuring to each additional sample within the population, using the sampling interval obtained in Step 4.

Example:

1. Measure the entire shelflist of the PC2001-3000. (Assume this total is 300 inches.)

2. Take seven one-inch samples from seven different drawers or from seven different places, if fewer than seven different drawers within the shelf-

list, and average them. (Assume this average to be 100 cards per inch)

3. Multiply 100 cards per inch by 300 inches of LC and get 30,000 cards for a total population.

4. Determine the number of samples necesary by applying the procedure in "Sample Size Determination." (Assume this yields 500 samples.)

5. Divide the total number of cards in the population by the number of samples: 24,000 divided by 500 = 60. This is the number of cards between samples.

6. Divide the number of cards between samples by the number of cards per inch: 60 divided by 100 = .6 inches. (See conversion table on Shelflist Distribution Form p. 6.) This is the distance between samples.

7. Select a random number within the number of cards between samples, in this case between 1 and 60. This is done by use of a random number table. (See p. 7.) Begin at the first of the population and count to the card that corresponds to the random number. This is the first sample.

8. From the first sample, measure .6 inches (5/8") and take another sample. Repeat this sampling throughout the entire population until you have your 500 sample items.

Shelflist Sections Measured: _____

SHELFLIST DISTRIBUTION FORM

Step 1: Take seven different samples from shelflist and record the number of cards per inch in each sample.

Sample 1	_____	Sample 5	_____
Sample 2	_____	Sample 6	_____
Sample 3	_____	Sample 7	_____
Sample 4	_____		
		Sum:	_____

Divide sum above by seven = _____ (Average number of cards/inch)

Step 2: (a) Measure length of shelflist in inches = _____ (Inches in shelflist)

(b) Multiply total inches of shelflist by average number of cards per inch (Step 1 x Step 2) = _____ (Total cards in shelf list)

Step 3: (a) Divide total cards in shelflist by number of sample items necessary = _____ (Number of cards between samples)

(b) Divide number of cards per sample interval by average number of cards per inch (Step 5 ÷ Step 2) = _____ (Inches per sample interval in hundredths)

Step 4: Convert inches per interval from "hundredths" to "sixteenths" by means of Index table below = _____ (Inches per sample interval in sixteenths)

Internal Index

Quotient/Sixteenths	Quotient/Sixteenths
0.0625 = 1/16	0.5625 = 9/16
.1250 = 2/16	.6250 = 10/16
.1875 = 3/16	.6875 = 11/16
.2500 = 4/16	.7500 = 12/16
.3125 = 5/16	.8125 = 13/16
.3750 = 6/16	.8750 = 14/16
.4375 = 7/16	.9375 = 15/16
.5000 = 8/16	1.0 = 16/16

TABLE 20. TABLE OF SAMPLE SIZES REQUIRED FOR FINITE POPULATIONS, FOR SELECTED CONFIDENCE LEVELS AND VARIOUS SAMPLE RELIABILITY LIMITS FOR SAMPLING ATTRIBUTES [12]

95% Confidence Level

Percent in Population Assumed to Be 50%*

Size of Population	Sample Size for Reliability of				
	±1%	±2%	±3%	±4%	±5%
1,000	**	**	**	375	278
2,000	**	**	696	462	322
3,000	**	1334	787	500	341
4,000	**	1500	842	522	350
5,000	**	1622	879	536	357
10,000	4899	1936	964	566	370
20,000	6489	2144	1013	583	377
50,000	8057	2291	1045	593	381
100,000	8763	2345	1056	597	383
500,000 to ∞	9423	2390	1065	600	384

* *This section of this table should be used only when the sampler is unable or unwilling to estimate a maximum (or minimum) occurrence rate to be expected. The use of this section of the table, while conservative, will result in a much larger sample size than found in other sections of the table where such an estimate is used.*

** *In these cases more than 50% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

Source: Adapted from and extended from tables in H. F. Hill, J. L. Roth, and H. Arkin, *Sampling in Auditing* (New York: The Ronald Press, 1962) with permission of the publisher.

99% Confidence Level

Percent in Population Assumed to be 50%*

Size of Population	Sample Size for Reliability of				
	±1%	±2%	±3%	±4%	±5%
1,000	**	**	**	**	400
2,000	**	**	959	683	498
3,000	**	**	1142	771	544
4,000	**	**	1262	824	569
5,000	**	2267	1347	859	586
10,000	**	2932	1556	939	622
20,000	9068	3435	1688	986	642
50,000	12456	3830	1778	1016	655
100,000	14229	3982	1810	1026	659
500,000 to ∞	16056	4113	1836	1035	663

* *This section of this table should be used only when the sampler is unable or unwilling to estimate a maximum (or minimum) occurrence rate to be expected. The use of this section of the table, while conservative, will result in a much larger sample size than found in other sections of the table where such an estimate is used.*

** *In these cases more than 50% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

SAMPLE SIZES

95% Confidence Level

Expected Rate of Occurrence Not over 5% or Not Less than 95%

Size of Population	Sample Size for Reliabilities of			
	±0.5%	±1%	±2%	±3%
1,000	*	*	313	169
2,000	*	954	371	184
3,000	*	1134	396	190
4,000	*	1253	409	192
5,000	*	1336	418	195
10,000	4220	1543	436	199
20,000	5348	1672	446	201
50,000	6370	1760	452	202
100,000	6803	1791	454	202
500,000 to ∞	7196	1818	456	203

* *In these cases more than 50% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

99% Confidence Level

Expected Rate of Occurrence Not over 5% or Not Less than 95%

Size of Population	Sample Size for Reliabilities of			
	±0.5%	±1%	±2%	±3%
1,000	*	*	441	260
2,000	*	*	565	298
3,000	*	*	624	314
4,000	*	1763	658	322
5,000	*	1934	681	327
10,000	*	2397	731	338
20,000	7730	2721	758	344
50,000	10063	2963	776	348
100,000	11189	3056	782	349
500,000 to ∞	12289	3132	787	350

* *In these cases more than 50% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

95% Confidence Level

**Expected Rate of Occurrence Not over 15%
or Not Less than 85%**

Size of Population	Sample Size for Reliabilities of			
	±1%	±2%	±3%	±4%
1,000	*	*	353	235
2,000	*	760	428	266
3,000	*	870	461	278
4,000	*	938	479	284
5,000	2474	984	491	289
10,000	3288	1091	516	297
20,000	3935	1154	530	302
50,000	4161	1195	538	304
100,000	4669	1210	541	305
500,000 to ∞	4850	1222	544	306

* *In these cases more than 50% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

99% Confidence Level

**Expected Rate of Occurrence Not over 15%
or Not Less than 85%**

Size of Population	Sample Size for Reliabilities of			
	±1%	±2%	±3%	±4%
1,000	*	*	485	346
2,000	*	*	640	418
3,000	*	1241	716	450
4,000	*	1384	761	467
5,000	*	1487	791	478
10,000	4583	1746	859	502
20,000	5946	1913	898	515
50,000	7237	2029	923	523
100,000	7801	2071	931	526
500,000 to ∞	8320	2106	938	528

* *In these cases more than 50% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

BEST COPY AVAILABLE

95% Confidence Level

Expected Rate of Occurrence Not over 30% or Not Less than 70%

Size of Population	Sample Size for Reliabilities of			
	±1%	±2%	±3%	±5%
1,000	*	*	473	244
2,000	*	*	619	278
3,000	*	1206	690	291
4,000	*	1341	732	299
5,000	*	1437	760	303
10,000	4465	1678	823	313
20,000	5749	1832	858	318
50,000	6946	1939	881	321
100,000	7465	1977	888	321
500,000 to ∞	7939	2009	895	322

* *In these cases more than 60% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

99% Confidence Level

Expected Rate of Occurrence Not over 30% or Not Less than 70%

Size of Population	Sample Size for Reliabilities of			
	±1%	±2%	±3%	±5%
1,000	*	*	*	360
2,000	*	*	873	436
3,000	*	*	1021	470
4,000	*	1862	1116	489
5,000	*	2053	1182	502
10,000	*	2584	1341	527
20,000	8213	2967	1437	542
50,000	10898	3257	1502	551
100,000	12231	3367	1525	554
500,000 to ∞	13557	3460	1544	557

* *In these cases more than 60% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

SELECTING A RANDOM NUMBER FROM A RANDOM NUMBER TABLE

A major problem in using a random number table is an unbiased selection of the first random number. Most methods for accomplishing this are arbitrary. The most important consideration is that the method of selection be determined before turning to the table.[7]

If it were necessary to take 100 samples from a population of 800 books, it would be necessary to sample every eighth book (800 divided by 100 = 8). To arrive at the entry point using a random number table, it is necessary to choose from the table a number between 1 and 8.[8] A predetermined arbitrary method to derive this number involves several steps.

Step 1: Put your pencil down on any number in a random number table.

Step 2: Count 3 numbers to the right.

Step 3: Count 4 numbers down and, proceeding downward, select the first number between 1 and 8.

Assuming the number 3 is the first number encountered between 1 and 8, then the third book would be the first sample taken. Proceeding, then, with every 8th sample thereafter, the numbers 11, 19, 27, 35, etc., would also be selected.[9]

The use of the random number table to begin the sampling is necessary if every element within the population is to have an equally likely chance of being selected. To grant integrity to the study, every book selected at random must be used in the study. Any temptation to skip a properly selected sample must be overcome.

Summary

Use of the above procedures will allow a collection of statistical samples for most library purposes. If needs arise in the process of collection assessment which are not met by the above, most simple statistics texts or handbooks can provide answers.

03991	10161	93716	16894	66083	24653	84609	58232	88618	19161
38555	95554	32886	59780	08355	60860	29735	47762	71299	23853
17546	73704	92052	46215	55121	29281	59076	07936	27954	58909
32643	52861	95819	06831	00911	98936	76355	93779	80863	00514
69572	68777	39510	35905	14060	40619	29549	69616	33564	60780
24122	66591	27699	06494	14845	46672	61958	77100	90899	75754
61196	30231	92962	61773	41839	55382	17267	70943	78038	70267
30532	21704	10274	12202	39685	23309	10061	68829	55986	66485
03788	97599	75867	20717	74416	53166	35208	33374	87539	08823
48228	63379	85783	47619	53152	67433	35663	52972	16818	60311
60365	94653	35075	33949	42614	29297	01918	28316	98953	73231
83799	42402	56623	34442	34994	41374	70071	14736	09958	18065
32960	07405	36409	83232	99385	41600	11133	07586	15917	06253
19322	53845	57620	52606	66497	68646	78138	66559	19640	99413
11220	91747	07399	37408	48509	23929	27482	45476	85244	35159
31751	57260	68980	05339	15470	48355	88651	22596	03152	19121
88492	99382	14454	04504	20094	98977	74843	93413	22109	78508
30934	47741	07481	83828	73788	06533	28597	20405	94205	20380
22888	48893	27499	98748	60530	45128	74022	84617	82037	10268
78212	16993	35902	91386	44372	15486	65741	14014	87481	37220
41849	84547	46850	52326	34677	58300	74910	64345	19325	81549
46352	33049	69248	93460	45305	07521	61318	31855	14413	70951
11087	96294	14013	31792	59747	67277	76503	34513	39663	77544
52701	08337	56303	87315	16520	69676	11654	09893	02181	68161
57275	36898	81304	48585	68652	27376	92852	55066	88448	03584
20857	73156	70284	24326	79375	95220	01159	63267	10622	48391
15633	81924	90115	93614	33521	26665	55823	47641	86225	31704
92694	48297	39904	02115	59589	49067	66821	41575	49767	04037
77613	19019	88152	00080	20554	91409	96277	48257	50816	97616
38688	32486	45134	63545	59404	72059	43947	51680	43852	59693
25163	01889	70014	15021	41290	67312	71857	15957	68971	11403
65251	07629	37239	33295	05870	01119	92784	26340	18477	65622
36815	43625	18637	37509	82444	09005	04921	73701	14707	93997
61197	11692	05327	82162	20247	81759	45197	25332	83745	22567
04515	25624	95096	67946	48460	85558	15191	18782	16930	33361
83761	60873	43253	84145	60833	25983	01291	41349	20368	07126
14187	06345	80854	09279	43529	06318	38384	74761	41196	37480
51321	92246	80086	77074	88722	56736	66164	49431	66919	31678
72472	00008	80890	18002	94813	31900	54155	83436	35352	54131
05466	55306	93128	18464	74457	90561	72848	11834	79982	68416
39528	72484	82474	25593	48545	35247	18619	13674	18611	19241
81616	18711	53142	44276	75122	11724	74627	73707	58319	15997
07586	16120	82641	22820	92904	13141	32392	19763	61199	67940
90767	01235	13574	17200	69902	63742	78464	22501	18627	90872
40188	28193	29593	88627	94972	11598	62095	36787	00441	58997
34414	82157	86887	55087	19152	00023	12302	80783	32624	68691
63439	75363	44989	16822	36024	00867	76378	41605	65961	73488
67049	09070	91199	45547	94458	74284	05041	49807	20288	34060
79495	04146	52162	90286	54158	34243	46978	35482	59362	95938
91704	30552	04737	21031	75051	93029	47665	64382	99782	93478

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19612	78430	11661	94770	77603	65669	86868	12665	30012	75989
39141	77400	28000	64238	73258	71794	31340	26256	66453	37016
64756	80457	08747	12836	03469	50678	03274	43423	66677	82556
92901	51878	56441	22998	29718	38447	06453	25311	07565	53771
03551	90070	09483	94050	45938	18135	36908	43321	11073	51803
98884	66209	06830	53656	14663	56346	71430	04909	19818	05707
27369	86882	53473	07541	53633	70863	03748	12822	19360	49088
59066	75974	63335	20483	43514	37481	58278	26967	49325	43951
91647	93783	64169	49022	98588	09495	49829	59068	38831	04838
83605	92419	39542	07772	71568	75673	35185	89759	44901	74291
24895	88530	70774	35439	46758	70472	70207	92675	91623	61275
35720	26556	95596	20094	73750	85788	34264	01703	46833	65248
14141	53410	38649	06343	57256	61342	72709	75318	90379	37562
27416	75670	92176	72535	93119	56077	06886	18244	92344	31374
82071	07429	81007	47749	40744	56974	23336	88821	53841	10538
21445	82793	24831	93241	14199	76268	70883	68002	03829	17443
72513	76400	52225	92348	62308	98481	29744	33165	33141	61020
71479	45027	76160	57411	13780	13632	52308	77762	88874	33697
83210	51466	09088	50395	26743	05306	21706	70001	99439	80767
68749	05148	94897	78636	96750	09024	94538	91143	96693	61866
05184	75763	47075	88158	05313	53439	14908	08830	60096	21551
13651	62546	96892	25240	47511	58483	87342	78818	07855	39269
00566	21220	00292	24069	45072	29519	52548	54091	21282	21296
50958	17695	58072	68990	60329	05055	71586	63417	35947	67807
57621	64547	46850	37981	38527	09037	64756	03324	04986	83666
09282	25844	70139	78435	35428	43561	69799	63314	12991	93516
23394	94206	93432	37836	94919	26846	02555	74410	94915	48199
05280	37470	93622	04345	15092	19510	18094	16613	78234	50001
95491	97976	38306	32192	82639	54624	72434	92606	23191	74693
78521	00104	18248	75583	90326	50785	54034	66251	35774	14692
96345	44579	85932	44053	75704	20840	86583	83944	52456	73766
77963	31151	32364	91691	47357	40338	23435	24065	08458	95366
07520	11294	23238	01748	41690	67328	54814	37777	10057	42332
38423	02309	70703	85736	46148	14258	29236	12152	05088	65825
02463	65533	21199	60555	33928	01817	07396	89215	30722	22102
15880	92261	17292	88190	61781	48898	92525	21283	88581	60098
71926	00819	59144	00224	30570	90194	18329	06999	26857	19238
64425	28108	16554	16016	00042	83229	10333	36168	65617	94834
79782	23924	49440	30432	81077	31543	95216	64865	13658	51081
35337	74538	44553	64672	90960	41849	93865	44608	93176	34851
05249	29320	19715	94082	14738	88667	43708	66354	93692	25527
56463	09380	38793	85774	19056	13939	46062	27647	66146	63210
96296	33121	54196	34108	75814	85986	71171	15102	28992	63165
98380	36269	60014	07201	62448	46385	42175	88350	46182	49126
52567	64350	16315	53969	80395	81114	54358	64578	47269	15747
78498	90830	25955	99236	43286	91064	99969	95144	64424	77377
49553	24241	08150	89535	08703	91041	77323	81079	45127	93686
32151	07075	83155	10252	73100	88618	23891	87418	45417	20268
11314	50363	26860	27799	49416	83534	19187	08059	76677	02110
12364	71210	87052	50241	90785	97889	81399	58130	64439	05614

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